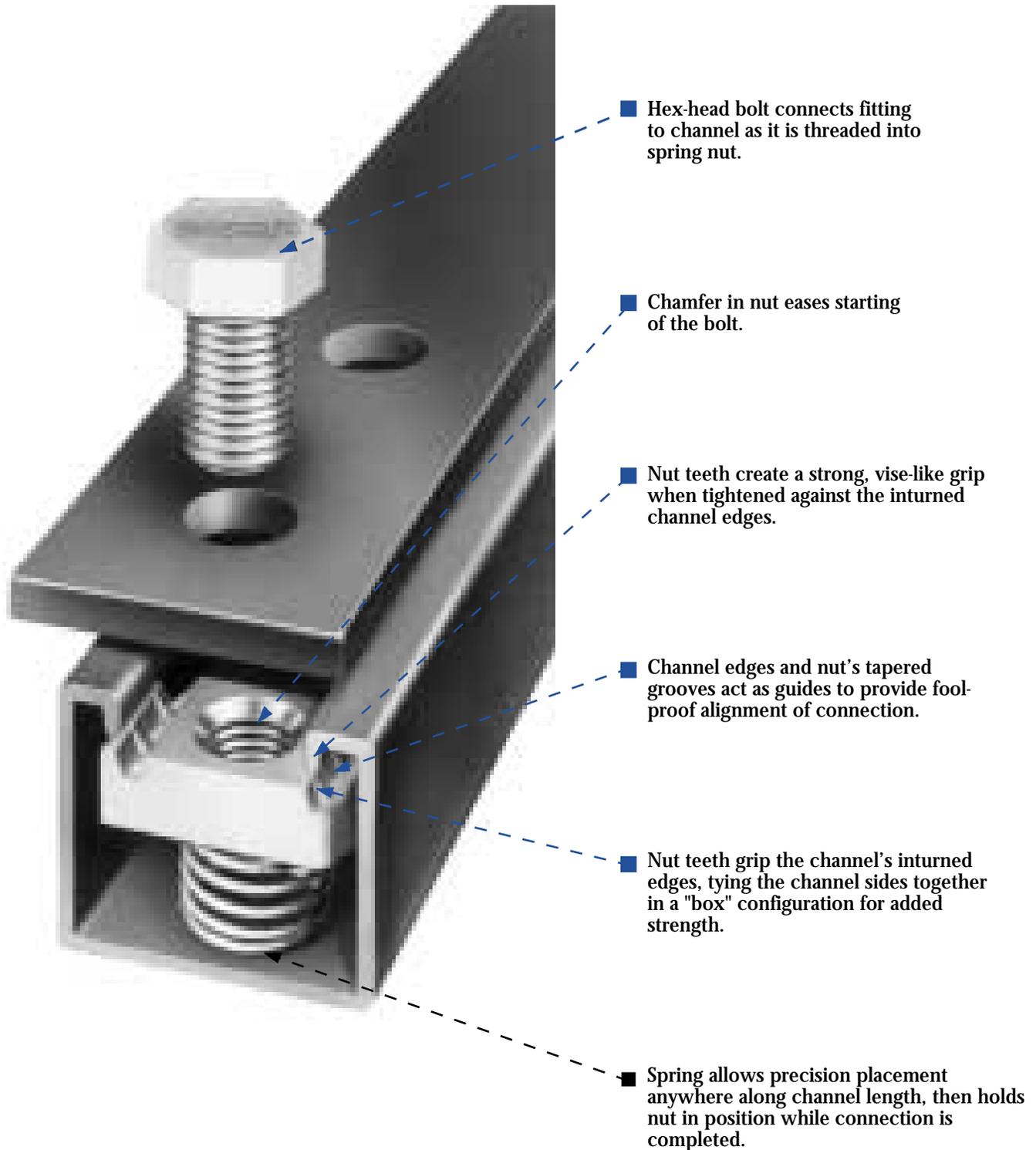


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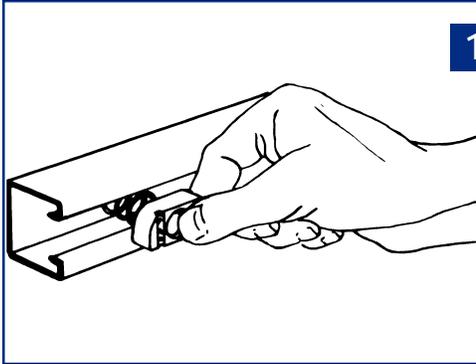
## Featuring The Unique Weldless Connection



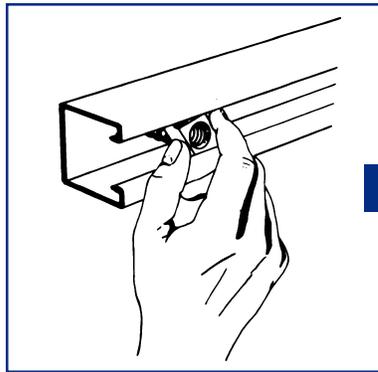
# UNISTRUT METAL FRAMING

THE ORIGINAL STRUT SYSTEM

Strong, Fast, Economical and Adjustable

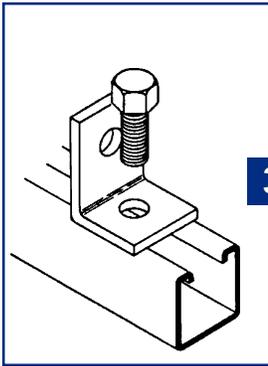


**1** Insert the spring nut anywhere along the continuous slotted channel. The rounded nut ends permit easy insertion.



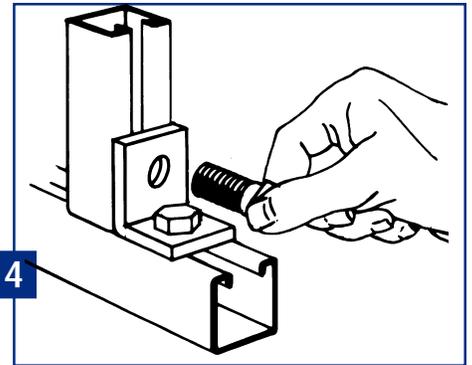
A 90° clockwise turn aligns the grooves in the nut with the inturred edges of the channel.

**2** Fittings can be placed anywhere along the channel opening, permitting complete freedom of adjustment. The need for drilling holes is eliminated.

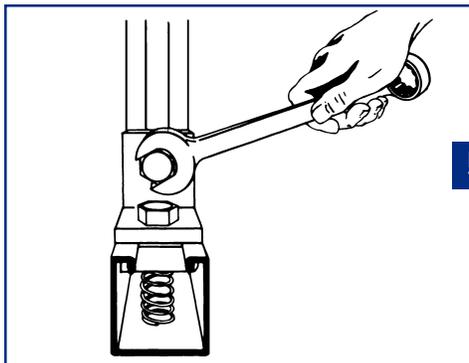


**3** Insert bolt through fitting and into the spring nut. (See illustration 5 for end view showing nut in place)

Additional channel sections can now be bolted to the fitting already in place by following procedure described in steps 1-3.



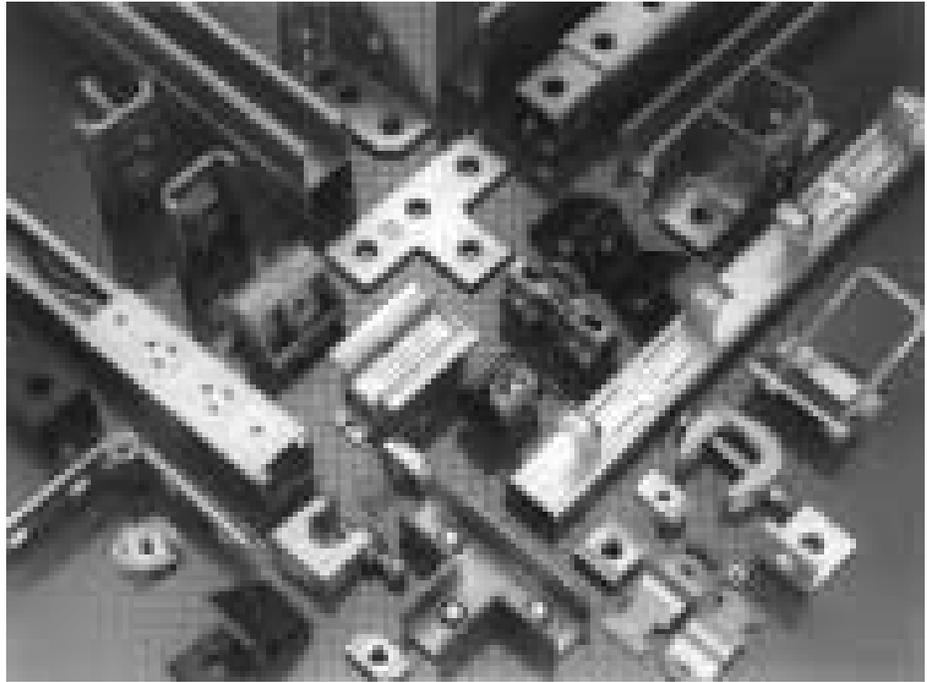
**4**



**5** Tightening with a wrench locks the serrated teeth of the nut into the inturred edges of the channel, to complete a strong, vise-like connection.

**Serving Design Professionals for Over 60 Years**

Unistrut products have been helping to build a better world since 1924. Used extensively in nuclear, industrial and commercial construction markets for over 60 years, Unistrut Metal Framing has set the standard for product design, quality and performance. The initial Unistrut concept — a simple spring nut and bolt connecting a fitting to a continuous slotted channel — has evolved into a comprehensive engineered building and support system.



**Unistrut — The Original Metal Framing System**

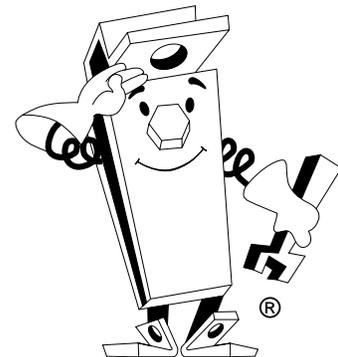
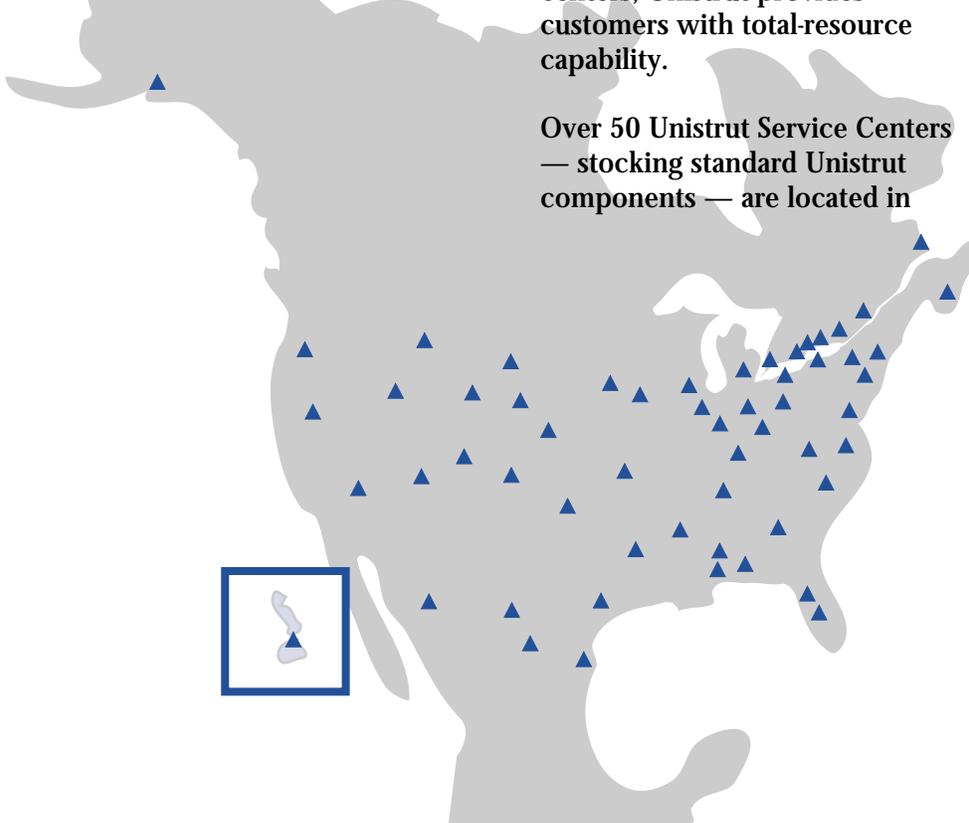
There is only one Unistrut Metal Framing System. It incorporates the innovative product improvements that our research and

development group has created to give you the most complete and flexible support system available. Backed by our worldwide network of engineering and distribution centers, Unistrut provides customers with total-resource capability.

principal cities in North America to serve you quickly and directly. Many Service Centers are equipped to design and supply drawings for any type of metal framing application and also offer fabrication and installation services.

Over 50 Unistrut Service Centers — stocking standard Unistrut components — are located in

This catalog is a comprehensive presentation of Unistrut Metal Framing components plus technical data required by design, specification and construction professionals.

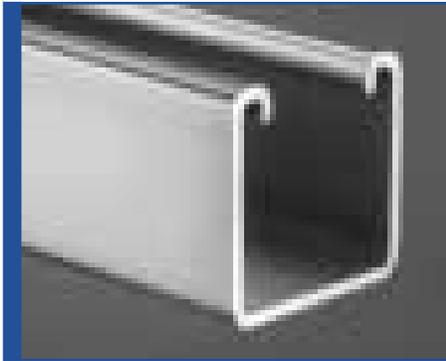


# UNISTRUT METAL FRAMING

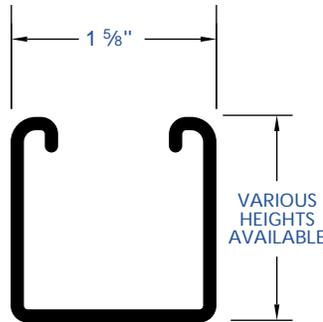
THE ORIGINAL STRUT SYSTEM

## The Most Complete Metal Framing System — Offering Three Channel-Width Options

Adjustability, demountability and reusability are engineered into each of the three Unistrut channel series. Each series offers channels of varying depth and gage plus a complete line of fittings and accessories.

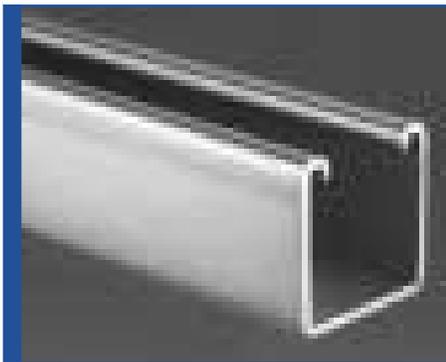


1<sup>5</sup>/<sub>8</sub>" width Series Channel begins on page 20.

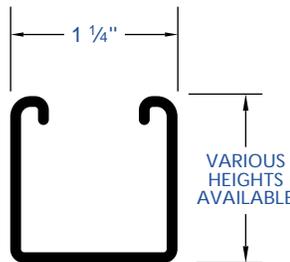


### 1<sup>5</sup>/<sub>8</sub>" (41mm) width

Designed to carry the heaviest loads and provide the widest variety of applications, the 1<sup>5</sup>/<sub>8</sub>" series has become the accepted standard for use in mechanical, electrical and general construction applications where supports and attachments must meet the highest strength requirements.

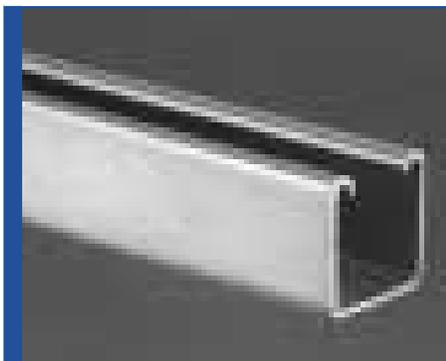


1<sup>1</sup>/<sub>4</sub>" width Series Channel begins on page 180.

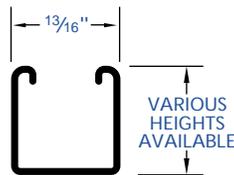


### 1<sup>1</sup>/<sub>4</sub>" (32mm) width

A framing system designed for medium loads, the 1<sup>1</sup>/<sub>4</sub>" series is especially suitable for use in the OEM, commercial and display markets. It maintains a lightness in scale and a clean line that makes it aesthetically pleasing as well as functional.



1<sup>3</sup>/<sub>16</sub>" width Series Channel begins on page 198.



### 1<sup>3</sup>/<sub>16</sub>" (21mm) width

A unique half-size reduction of the 1<sup>5</sup>/<sub>8</sub>" channel-width series, this smaller channel size can be used to carry light loads economically in applications such as instrumentation, retail displays and light-duty laboratory supports. It also provides the flexibility found in all Unistrut framing systems.

# A STATEMENT OF QUALITY

Unistrut Corporation's growth and leadership in the metal framing industry is a direct result of developing and maintaining the highest standards of quality with respect to raw materials, manufacturing and finishing. Design criteria and testing are based on the most stringent industry codes and standards. The commercial grade quality-assurance program developed and adopted by Unistrut Corporation has been audited and accepted by member utilities of the nuclear power-generating industry.

For Unistrut safety-related products conforming to 10CFR50 Appendix B, 10CFR21, ANSI N45.2 and NQA-1, consult our Nuclear Power Engineering catalog. Conformance to your Canadian Standards Association CSA 299.4 Quality Assurance Program also available.

Unistrut is committed to being the "best" in the metal framing industry. In order to meet this goal, Unistrut has adopted the philosophy of "Zero Defects and Continuous Improvement". This means on-going reviews of our manufacturing processes, operating procedures and quality systems to find ways of improving efficiency, productivity and quality. It means establishing process controls and problem-prevention techniques to ensure that superior quality is built into every Unistrut product.

Our drive to be the best includes not just quality products, but on-time delivery and prompt resolution of customer needs and concerns. At Unistrut, quality is number one.



## QUALITY ASSURANCE

### Product Testing is an Important Part of Unistrut's Quality-Assurance Program.

We utilize our own testing facilities, as well as those of independent testing laboratories, to determine design loads with proper and adequate safety factors. These design loads are indicated, where applicable, throughout the catalog. Loads are based on AISI Specification For The Design Of Cold-Formed Steel Structural Members, August 1986 Edition, December 1989 Addendum.

Destructive and non-destructive testing procedures are used to test for variables such as corrosion, conductivity, electro-static dissipation, ultra-violet resistance, wind resistance, dimensional accuracy, material integrity and slip resistance.



*Fixture testing of Unistrut brackets establishes design loads and technical specifications.*



In short, if there's a specification to meet, Unistrut will develop a test to quantify and verify it. Using design properties of the Unistrut framing members, load data given in this catalog, and/or design procedures of the American Iron & Steel Institute Specification For The Design Of Cold-Formed

Steel Structural Members, August 1986 Edition, December 1989 Addendum, it is possible to design any type of structure within the capabilities of the system. Assemblies or connections that cannot be calculated using provisions of the AISI specifications must be established by application-specific tests.

*Regular QC checks assure that our products continue to meet rigid Unistrut quality-control standards.*

## A Leader Knows How to Listen...

The original Unistrut Metal Framing System was the product of a single-minded search for a better, faster, more economical way to build structural supports. That spirit of innovation continues to fuel Unistrut research and development programs, that have resulted in literally hundreds of new fittings, channel designs and accessories.

Our research and development process starts with the customer. First, we listen. Then we get to work on ideas to meet the customer's needs. That approach has kept us a step ahead in product development ever since we introduced the Unistrut Metal Framing concept in 1940. Unistrut research and development engineers also have



*We stay in touch with changing customer needs by listening to the professionals who specify and use Unistrut products every day.*



*A steady-stream of new-product and special-application prototypes helps keep the Unistrut metal framing system as current as today's customer needs.*

extensive experience in product "design-for-application" projects. New products, materials, coatings and systems-development expertise are available through Unistrut's manufacturing facilities. Customers who have utilized Unistrut's research and development capabilities include members of the nuclear-power, automotive, aerospace, environmental-protection industries and engineering profession.

If you have a special need or a unique application, turn to Unistrut for engineering and design assistance. Helping *you* is the cornerstone of our R&D effort.

# MATERIALS AND FINISHES

## Framing Members

Unistrut channels and continuous inserts are accurately and carefully cold-formed to size from low carbon strip steel. One side of the channel has a continuous slot with inturned edges. Secure attachments may be made to the framing member with the use of hardened, toothed, slotted nuts which engage the inturned edges.

Raw steel shall conform to the following ASTM specifications.

GAGE	FINISH	ASTM NO.
12	GR & HG PG	A570 GR 33 A653 GR 33
14	GR & HG PG	A570 GR 33 A653 GR 33
16	GR & HG PG	A366 A653 GR 33
19	GR	A366

## Fittings

Unistrut fittings, unless noted otherwise, are punch-press made from hot rolled, pickled and oiled steel plates, strip or coil, and conform to ASTM specifications A575, A576, A635 or A36. The fitting steel also meets the physical requirement of ASTM A570 GR 33. The pickling of the steel produces a smooth surface free from scale.

## Nuts and Bolts

Unistrut nuts are made from steel bars. After all machining operations are complete, they are thoroughly case hardened. Nuts are rectangular with ends shaped to permit a quarter turn clockwise in the framing member

after insertion through the slotted opening in the channel. Two toothed grooves in the top of the nut engage the inturned edges of the channel and, after bolting operations are completed, will prevent any movement of the bolt and nut within the framing member. All bolts and nuts have Unified coarse screw threads. The standard framing nut is ½" and conforms to ASTM Specification A576 GR 1015 (material only). Screws conform to SAE J429 GR 2 (also meets and exceeds ASTM A307).

## Finishes

### PERMA-GREEN® II (GR)

Channel and parts are carefully cleaned and phosphated. Immediately after phosphating, a uniform coat of a highly effective rust-inhibiting acrylic enamel paint is applied by electro-deposition and thoroughly baked. Color is Perma-Green per Federal Standard 595a color number 14109 (dark limit V-). The resulting finish will withstand 400 hours of salt spray when tested in accordance with ASTM designation B-117.

### ELECTRO-GALVANIZED (EG)

Parts, screws and nuts are coated with zinc electrolytically to commercial standards (ASTM - B633 Type III SC1).

### PLAIN (PL)

Plain finish designation means that the channel retains the oiled surface applied to the raw steel during the rolling process. The fittings have the original oiled surface of the bar-stock material.

### PRE-GALVANIZED (PG)

Material (steel strip) is coated with zinc by hot-dip process prior to roll-forming or press operations. The zinc coating weight is G90 conforming to ASTM Specification A653 GR 33.

### HOT-DIPPED GALVANIZED (HG)

Material is coated with zinc after being roll-formed or after all manufacturing operations are completed, conforming to ASTM specification No. A123 or A153.

### SPECIAL COATING

When specific applications require other than standard available finishes, special finishes can be supplied per customer requirements.

### WEIGHTS AND DIMENSIONS

Weights given for all materials are approximate shipping weights. All dimensions subject to commercial tolerance within published specifications.

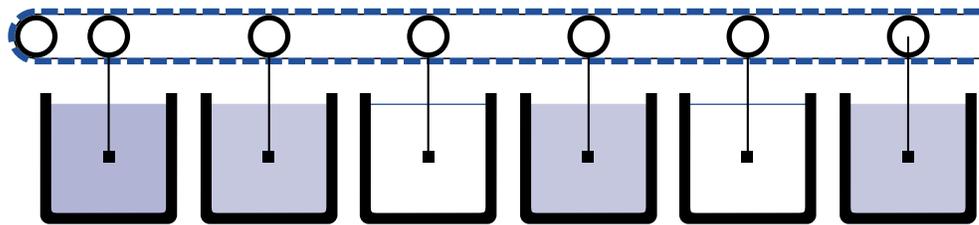
**WE RESERVE THE RIGHT TO MAKE SPECIFICATION CHANGES WITHOUT NOTICE .**

**WHILE EVERY EFFORT HAS BEEN MADE TO ASSURE THE ACCURACY OF INFORMATION CONTAINED IN THIS CATALOG AT THE TIME OF PUBLICATION, WE CANNOT ACCEPT RESPONSIBILITY FOR INACCURACIES RESULTING FROM UNDETECTED ERRORS OR OMISSIONS.**

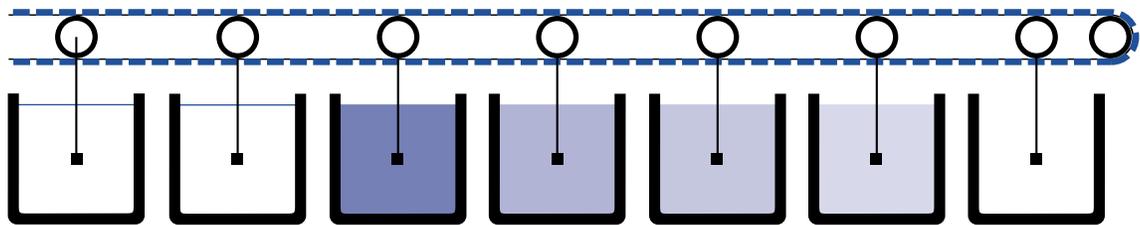
**THE BLUE COLOR USED ON UNISTRUT COMPONENTS ILLUSTRATED IN THIS CATALOG IS FOR GRAPHIC ENHANCEMENT ONLY, AND DOES NOT REPRESENT ACTUAL PRODUCT COLOR.**

## Perma-Green® II

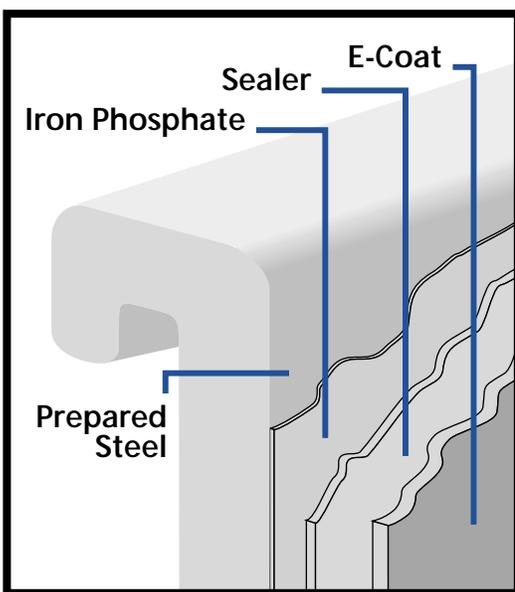
*The performance of Unistrut's Perma-Green II far exceeds that of conventional finishes. And compared to competitive "high-performance" coatings, Perma-Green II provides superior resistance to chalking, checking and fading and is far less vulnerable to common acidic atmospheres, solvents and alkalis. Just as important, Perma-Green II is the result of an environmentally neutral process that virtually eliminates the toxic metals commonly found in competitive paint-based finishes.*



- TANK 1**  
First stage hot alkaline cleaning of channel.
- TANK 2**  
Second stage hot alkaline cleaning of channel.
- TANK 3**  
Channel is rinsed to remove cleaning solution.
- TANK 4**  
Channel is phosphated to produce an iron phosphate coating.
- TANK 5**  
Channel is rinsed to remove excess phosphate solution.
- TANK 6**  
Sealer is applied.



- TANK 7**  
First stage deionizer water rinse to remove excess sealer.
- TANK 8**  
Second stage deionized water rinse to prepare channel for E-Coating.
- TANK 9**  
Electro-deposition tank applies the acrylic Perma-Green® II to all surfaces.
- TANK 10**  
First stage permeate rinse to remove excess E-Coat.
- TANK 11**  
Second stage permeate rinse to prepare channel for surfactant.
- TANK 12**  
Surfactant rinse to prepare channel for cure.
- OVEN**  
The cure process dries the channel and cross links the acrylic thermoset resins.



Unistrut Perma-Green II is a factory applied, electro-deposition acrylic coating with superior rust protection and fade-resistance. The acrylic coating is a proprietary formulation and is essentially "heavy-metal" free. The electrodeposition coating process provides a smooth, hard, durable surface which is completely cured. This inhibits introduction of airborne contaminants which can adversely affect sensitive manufacturing environments.

Before the electrodeposition acrylic coating is applied, Unistrut channel and fittings are

thoroughly cleaned and coated with an iron phosphate conversion coating. Unistrut's unique, custom-designed "prep" process consists of eight separate steps, the most thorough in the industry. The cleaning, phosphating and electrodeposition coating processes are continuous and, unlike "batch" processing, result in a uniform quality coating.

Production samples are tested on a continuous basis for corrosion resistance. Unistrut Perma-Green II exceeds 400 hours salt spray (1/8" creep from scribe) when tested to ASTM B117. Unscribed samples exceed 600 hours salt spray.

# MATERIALS AND FINISHES

## PERMA-GREEN® II TECHNICAL DATA

### STEEL SUBSTRATE PREPARATION

Eight stage continuous cleaning, phosphate process.

Substrate after “prep”: sealed iron phosphate conversion coating.

### COATING

Thermoset acrylic

Color: Green Federal STD. 595A, Color No. 14109, Dark Limit V-.

Hardness: 2H.

Coating Process: Anodic Electrodeposition.

### PERFORMANCE

Salt Spray:

Scribed: exceeds 400 hours per ASTM B117.

Unscribed: exceeds 600 hours per ASTM B117.

Chalk: nominal at 1,000 hours per weatherometer G-23 test.

Checking: None at 1,000 hours per weatherometer G-23 test.

Fade: Less than 50% compared to standard epoxy E.C. coatings.

### ENVIRONMENTAL ISSUES

Formulated as a “heavy metal”-free coating (trace elements only).

Outgassing in service: essentially none at 350°F for 24 hours.

## Zinc Coating

Unistrut products are available in three types of zinc coatings: electroplated, pregalvanized and hot dip galvanized.

Zinc coatings offer two types of protection:

1. **Barrier:** The zinc coating protects the steel substrate from direct contact with the environment,
2. **Sacrificial:** The zinc coating will protect scratches, cut edges, etc. through an anodic sacrificial process.

The service life of zinc coating is directly related to the zinc coating thickness. As shown in graph, when the zinc coating is double, the service life is double under most conditions.

## Electroplated Zinc- ASTM B633 Type III SC1

In the electroplating process, the part to be zinc coated is immersed in a solution of zinc ions. An electric current causes the zinc to be deposited on the part.

Zinc plated parts typically have a zinc coating of .2 to .5 MIL and are recommended for dry indoor use.

## Pregalvanized Zinc- ASTM A525

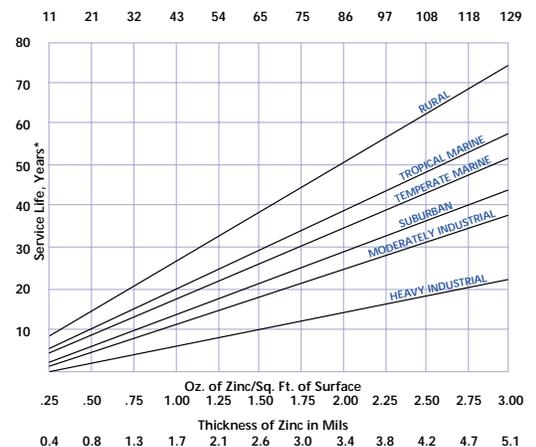
Pregalvanized steel is zinc coated by a hot dip process. Steel strip from a coil is fed through a continuous zinc coater which cleans, fluxes and coats the steel with molten zinc. After cooling, the steel is recoiled.

The pregalvanized zinc coating conforms to a G-90 thickness designation per ASTM A653. The zinc thickness is .75 MIL or .45 oz./sq. ft. of surface area.

This coating is offered on Unistrut channel and tubing and is a well-proven, time-tested performer for indoor and outdoor applications. For severe corrosion applications, hot dip galvanizing, as described below, is a good alternative.

LIFE OF PROTECTION VS. THICKNESS OF ZINC AND TYPE OF ATMOSPHERE

\* Service Life is defined as the time to 5% rusting of the steel surface



## Hot Dip Galvanized- ASTM A123 OR A153

In hot dip galvanizing, the finished part is immersed in a bath of molten zinc. This method results in complete zinc coverage and a thicker coating than pregalvanized or plated zinc.

The zinc coating is typically 2.6 MIL or 1.5 oz./sq. ft. of surface area.

This is the coating of choice for applications where severe corrosion is a design factor.

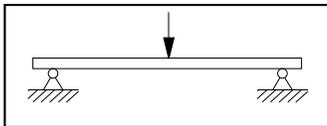
## A) BEAMS

Beams are structural members loaded at right angles (perpendicular) to their length. Most beams are horizontal and subjected to gravity or vertical loads, e.g. a shelf support. However a vertical member can act as a beam under certain conditions, such as a curtain wall mullion subjected to wind loading. The bending moment developed in a beam is dependent on

- (a) the amount of load applied,
- (b) the type of loading applied, and
- (c) the support conditions.

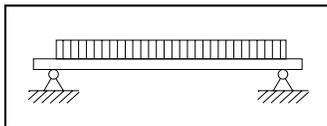
### 1) Types of Beam Loading

#### a) Point Load



A load concentrated onto a very small length of the beam is a point load.

#### b) Uniform Load

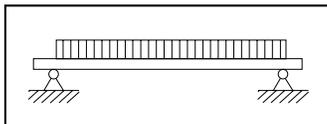


A load spread evenly over a relatively long length of the beam is a uniform load.

Point and uniform loads can be placed on a beam in any combination. A series of point loads can approximate a uniform loading. The load charts and tables are based on a uniform load unless identified otherwise.

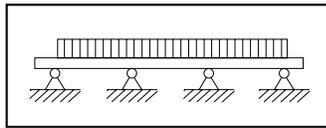
### 2) Support conditions

#### a) Simple Beam



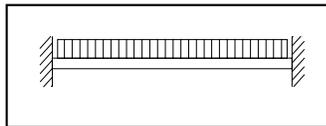
A simple beam has supports that prevent movement left and right, or up and down, but do not restrain the beam from rotating at the supports into a natural deflected curve. Most Unistrut Metal Framing connections produce simple beams. The load charts and tables are based on simple beams unless identified otherwise.

#### b) Continuous Beam



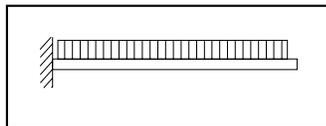
Any simple beam that is supported at one or more intermediate points is a continuous beam. A mezzanine joist that passes over three or more columns is an example of a continuous beam.

#### c) Fixed-End Beam



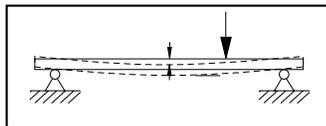
Supports that prevent the beam from rotating into a natural deflected curve, produce a fixed-end beam. A welded end connection to very rigid support produces a fixed-end beam.

#### d) Cantilever Beam



A cantilever beam is a fixed-end beam that is supported at one end only, while the other end is unsupported. Unistrut brackets are examples of cantilever beams.

### 3) Deflection



All beams deflect under load. The amount of deflection is dependent on

- (a) the amount of load,
- (b) the support conditions,
- (c) the stiffness of the beam's cross-sectional shape, and
- (d) the stiffness of the beam material.

The stiffness of the beam's cross-sectional shape is measured by its "Moment Of Inertia" or "I". The larger a beam's "I", the stiffer it is and the less it will deflect. A beam's "I" can change for each major axis. The "I" of both major axes (I 1-1 and I 2-2) are provided. The stiffness of a beam's

material is measured by its "Modulus of Elasticity" or "E". The larger a material's "E", the stiffer it is and the less it deflects. For example, steel is about three times stiffer than aluminum and as a result, deflects only one-third as much. Do not confuse stiffness with strength. Two materials may have identical strengths yet still have different "E's". A high-strength aluminum may be as strong as steel and still deflect three times as much. The load charts and tables give calculated deflections for the loads shown. In many cases, a final design will be determined by the maximum deflection, not the maximum load.

### 4) Bending Moment

Is it strong enough? This is the final consideration for any beam. A beam must not only hold up the anticipated loads, but must also have sufficient additional capacity to safely hold unforeseen variations in applied loads and material strengths. This additional capacity is called a safety factor and is usually regulated by the various design codes and standards. A beam's strength is usually measured by an allowable bending moment or an allowable stress. The traditional approach is the allowable stress method, where a beam is determined to have a maximum allowable stress (in pounds per square inch) which is not to be exceeded. The approach of the current AISI "Specification For The Design Of Cold-Formed Steel Structural Members" is to use a maximum allowable bending moment (in inch-pounds) which is not to be exceeded. Bending moment divided by a beam's section modulus or "S" equals stress.

## B) COLUMNS

Columns are structural members that are loaded parallel to their length. Most columns are vertical and are used to carry loads from a higher level to a lower level. However any member subjected to compression loads, such as a diagonal or prop brace, is a column.

A column fails by "buckling", which is a sudden loss of straightness and subsequent collapse. Allowable column load is dependent on

- (a) the length of column,
- (b) the type of loading,
- (c) the support conditions, and
- (d) the column's cross-sectional shape and material.

# DESIGN FUNDAMENTALS

## 1) Column Length

The column length is measured from braced point to braced point. A braced point is where the column is restrained from lateral movement (translation) in all directions.

## 2) Types Of Column Loading

### a) Concentric Loading

Loads applied to the center of gravity of the column cross-section are considered concentric. A beam that passes over and rests on the top of a column is an example of concentric loading.

### b) Eccentric Loading

Any load which is not concentric is eccentric. The amount of eccentricity (in inches) has a major effect on the load-carrying capacity of any particular column. A load that is transmitted to a Unistrut Metal Framing column using a standard fitting bolted to the slot face is considered eccentric.

The load tables give allowable loads for both concentric (loaded at C.G.) and certain eccentric (loaded at slot face) loading. Allowable loads for other eccentric loading must be determined by a qualified design professional.

## 3) Support Conditions

Based on the support conditions, an appropriate "K" value is selected. This "K" value, which mathematically describes the column end conditions, is used in the column design equations. The most common support condition combinations are as follows:

### a) Fixed Top – Fixed Bottom



Both ends are restrained against rotation and lateral movement (translation). "K" equals .65.

### b) Pinned Top – Fixed Bottom



The top is restrained against lateral movement (translation) but, is allowed to rotate. The bottom is restrained against rotation and lateral movement. This is a common support condition and is used to construct the allowable column load applied at the Slot Face tables. "K" equals .80.

### c) Pinned Top – Pinned Bottom



Both ends are restrained against lateral movement (translation) but, are allowed to rotate. "K" equals 1.0.

### d) Fixed / Free Top – Fixed Bottom



The top is restrained against rotation but is allowed to move laterally. The bottom is restrained against rotation and lateral movement (translation). "K" equals 1.2.

## 4) Cross-Sectional Shape

The cross-sectional shape of a column member determines the value of its "Radius of Gyration" or "r". In general,

a member with a large "r" makes a better column than a member with a small "r". Each axis of a column has a different "r". Typically the axis with the smallest "r" determines the final design.

## C) BOLT TORQUE

Bolt torque values are given to ensure the proper connection between Unistrut Metal Framing components. It is important to understand that there is a direct, but not necessarily consistent, relationship between bolt torque and tension in the bolt. Too much tension in the bolt can cause it to break or crush the component parts. Too little tension in the bolt can prevent the connection from developing its full load capacity. The torque values given have been developed over many years of experience and testing.

BOLT SIZE	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
FOOT LBS.	6	11	19	50	100	125
N·m	8	15	25	70	135	170

These are based on using a properly calibrated torque wrench with a clean dry (non-lubricated) Unistrut fitting, bolt and nut. A lubricated bolt or nut can cause extremely high tension in the connection and may lead to bolt failure. It must be noted that the accuracy of commercial torque wrenches varies widely and it is the responsibility of the installer to ensure that proper bolt torque has been achieved.

# CONVERSION FACTORS

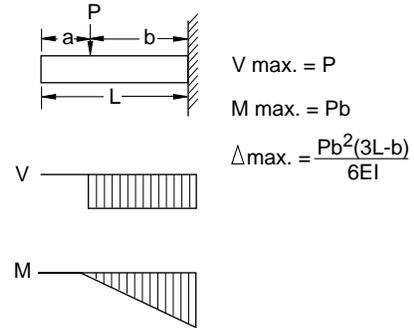
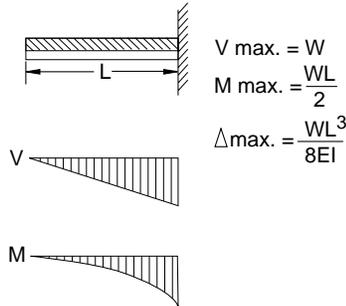
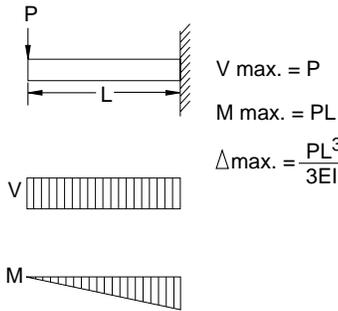


<b>To Convert From</b>	<b>To</b>	<b>Multiply By</b>	<b>To Convert From</b>	<b>Multiply To</b>	<b>By</b>
<b>Length</b>					
Inch [in]	Millimeter [mm]	25.400 000	Millimeter [mm]	Inch [in]	0.039 370
Foot [ft]	Meter [m]	0.304 800	Meter [m]	Foot [ft]	3.280 840
Yard [yd]	Meter [m]	0.914 400	Meter [m]	Yard [yd]	1.093 613
Mile (U.S. Statute) [mi]	Kilometer [km]	1.609 347	Kilometer [km]	Mile (U.S. Statute) [mi]	0.621 370
<b>Area</b>					
Square Inch [in <sup>2</sup> ]	Square Millimeter [mm <sup>2</sup> ]	645.16	Square Millimeter [mm <sup>2</sup> ]	Square Inch [in <sup>2</sup> ]	0.001550
Square Foot [ft <sup>2</sup> ]	Square Meter [m <sup>2</sup> ]	0.092 903	Square Meter [m <sup>2</sup> ]	Square Foot [ft <sup>2</sup> ]	10.763 915
Square Yard [yd <sup>2</sup> ]	Square Meter [m <sup>2</sup> ]	0.836 127	Square Meter [m <sup>2</sup> ]	Square Yard [yd <sup>2</sup> ]	1.195 991
Square Mile [mi <sup>2</sup> ] (U.S. Statute)	Square Kilometer [km <sup>2</sup> ]	2.589 998	Square Kilometer [km <sup>2</sup> ]	Square Mile [mi <sup>2</sup> ] (U.S. Statute)	0.386 101
Acre	Square Meter [m <sup>2</sup> ]	4046.873	Square Meter [m <sup>2</sup> ]	Acre	0.000 247
Acre	Hectare	0.404 687	Hectare	Acre	2.471 046
<b>Volume</b>					
Cubic Inch [in <sup>3</sup> ]	Cubic Millimeter [mm <sup>3</sup> ]	16387.06	Cubic Millimeter [mm <sup>3</sup> ]	Cubic Inch [in <sup>3</sup> ]	0.000061
Cubic Foot [ft <sup>3</sup> ]	Cubic Meter [m <sup>3</sup> ]	0.028 317	Cubic Meter [m <sup>3</sup> ]	Cubic Foot [ft <sup>3</sup> ]	35.314 662
Cubic Yard [yd <sup>3</sup> ]	Cubic Meter [m <sup>3</sup> ]	0.764 555	Cubic Meter [m <sup>3</sup> ]	Cubic Yard [yd <sup>3</sup> ]	1.307 950
Gallon (U.S. Liquid) [gal]	Litre [l]	3.785 412	Litre [l]	Gallon (U.S. Liquid) [gal]	0.264 172
Quart (U.S. Liquid) [qt]	Litre [l]	0.946 353	Litre [l]	Quart (U.S. Liquid) [qt]	1.056 688
<b>Mass</b>					
Ounce (Avoirdupois) [oz]	Gram [g]	28.349 520	Gram [g]	Ounce (Avoirdupois) [oz]	0.035 274
Pound (Avoirdupois) [lb]	Kilogram [kg]	0.453 592	Kilogram [kg]	Pound (Avoirdupois) [lb]	2.204 624
Short Ton	Kilogram [kg]	907.185	Kilogram [kg]	Short Ton	0.00110
<b>Force</b>					
Ounce-Force	Newton [N]	0.278 014	Newton [N]	Ounce-Force	3.596 941
Pound-Force [lbf]	Newton [N]	4.448 222	Newton [N]	Pound-Force [lbf]	0.224 809
<b>Bending Moment</b>					
Pound-Force-Inch [lbf-in]	Newton-Meter [N-m]	0.112 985	Newton-Meter [N-m]	Pound-Force-Inch [lbf-in]	8.850 732
Pound-Force-Foot [lbf-ft]	Newton-Meter [N-m]	1.355 818	Newton-Meter [N-m]	Pound-Force-Foot [lbf-ft]	0.737 562
<b>Pressure, Stress</b>					
Pound-Force per Square Inch [lbf/in <sup>2</sup> ]	Kilopascal [kPa]	6.894 757	Kilopascal [kPa]	Pound-Force per Square Inch [lbf/in <sup>2</sup> ]	0.145 038
Foot of Water (39.2 F)	Kilopascal [kPa]	2.988 980	Kilopascal [kPa]	Foot of Water (39.2 F)	0.334 562
Inch of Mercury (32 F)	Kilopascal [kPa]	3.386 380	Kilopascal [kPa]	Inch of Mercury (32 F)	0.295 301
<b>Energy, Work, Heat</b>					
Foot-Pound-Force [ft-lbf]	Joule [J]	1.355 818	Joule [J]	Foot-Pound-Force [ft-lbf]	0.737 562
British Thermal Unit [Btu]	Joule [J]	1055.056	Joule [J]	British Thermal Unit [Btu]	0.000948
Calorie [cal]	Joule [J]	4.186 800	Joule [J]	Calorie [cal]	0.238 846
Kilowatt Hour [kW-h]	Joule [J]	3600000	Joule [J]	Kilowatt Hour [kW-h]	2.78 <sup>-7</sup>
<b>Power</b>					
Foot-Pound-Force /Second [ft-lbs/s]	Watt [W]	1.355 818	Watt [W]	Foot-Pound-Force /Second [ft-lbs/s]	0.737 562
British Thermal Unit /Hour [Btu/h]	Watt [W]	0.293 071	Watt [W]	British Thermal Unit /Hour [Btu/h]	3.412 142
Horsepower (550 Ft. Lbf/s) [hp]	Kilowatt [kW]	0.745 700	Kilowatt [kW]	Horsepower (550 Ft. Lbf/s) [hp]	1.341 022
<b>Angle</b>					
Degree	Radian [rad]	0.017 453	Radian [rad]	Degree	57.295 788
<b>Temperature</b>					
Degree Fahrenheit [F]	Degree Celsius [C]	(F° -32)/1.8	Degree Celsius [C]	Degree Fahrenheit [F]	1.8xC°+32

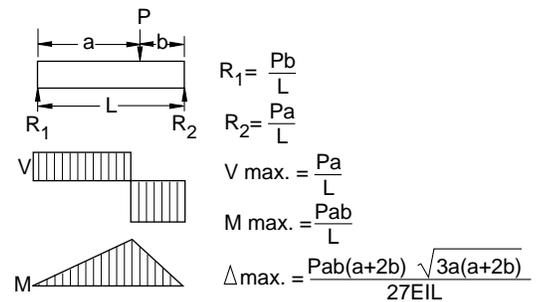
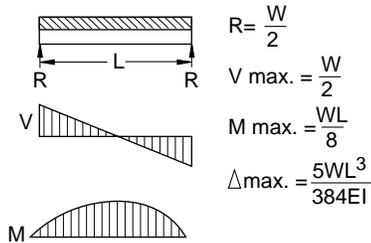
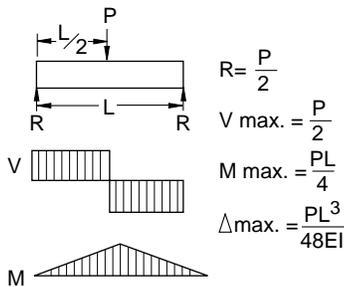
# REFERENCE TABLES AND DATA

## FORMULAE ON COMMON BEAM LOADINGS

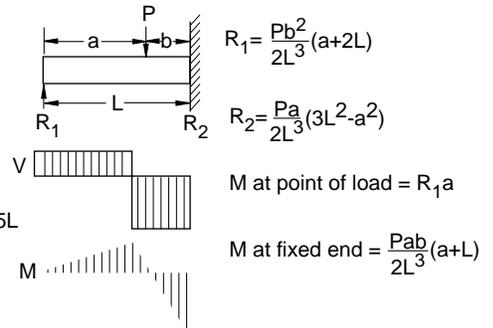
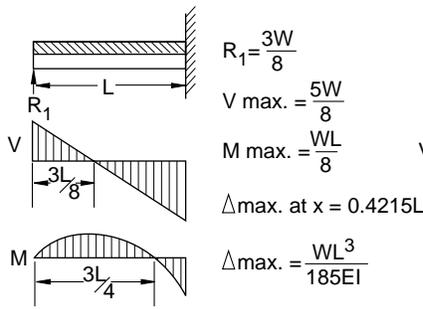
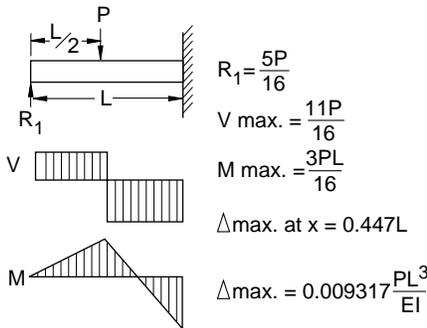
### CANTILEVER BEAMS



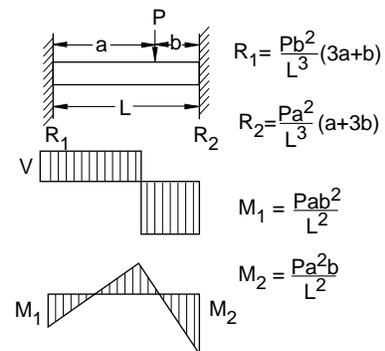
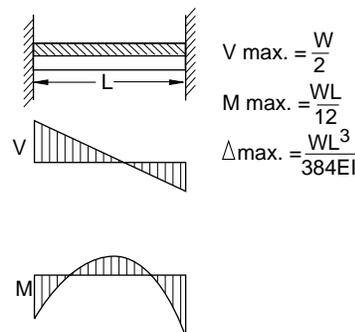
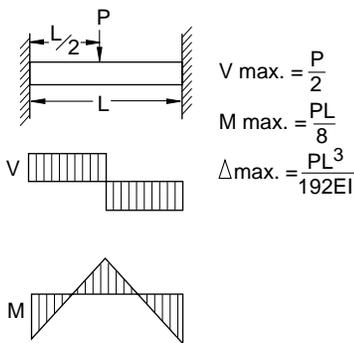
### SIMPLE BEAMS



### BEAMS FIXED AT ONE END, SUPPORTED AT OTHER



### BEAMS FIXED AT BOTH ENDS



R – Reaction  
 M – Moment  
 P – Concentrated Load

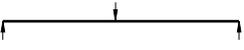
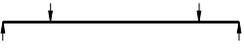
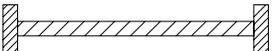
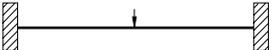
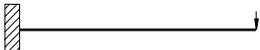
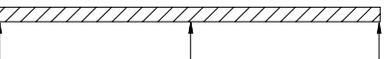
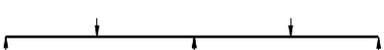
W – Total Uniform Load  
 V – Shear  
 L – Length

$\Delta$  – Deflection  
 E – Modulus of Elasticity  
 I – Moment of Inertia

## CONVERSION FACTORS FOR BEAMS WITH VARIOUS STATIC LOADING CONDITIONS

All Beam Load tables are for single-span (simple) beams supported at the ends. These can be used in the majority of the cases.

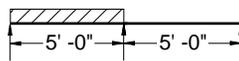
There are times when it is necessary to know what happens with other loading and support conditions. Some common arrangements are shown below. Simply multiply the values from the Beam Load tables by factors given below

LOAD AND SUPPORT CONDITION	LOAD FACTOR	DEFLECTION FACTOR
1. Simple Beam, Uniform Load 	1.00	1.00
2. Simple Beam, Concentrated Load at Center 	.50	.80
3. Simple Beam, Two Equal Concentrated Loads at 1/4 pts 	1.00	1.10
4. Beam Fixed at Both Ends, Uniform Load 	1.50	.30
5. Beam Fixed at Both Ends, Concentrated Load at Center 	1.00	.40
6. Cantilever Beam, Uniform Load 	.25	2.40
7. Cantilever Beam, Concentrated Load at End 	.12	3.20
8. Continuous Beam, Two Equal Spans, Uniform Load on One Span 	1.30	.92
9. Continuous Beam, Two Equal Spans, Uniform Load on Both Ends 	1.00	.42
10. Continuous Beam, Two Equal Spans, Concentrated Load at Center of One Span 	.62	.71
11. Continuous Beam, Two Equal Spans, Concentrated Load at Center of Each Span 	.67	.48

### EXAMPLE I

#### PROBLEM:

Determine load and deflection of a P 1000 beam continuous over one support and loaded uniformly on one span.



#### SOLUTION:

- From load table for P1000 on page 24 load for a 5'-0" span is 680# and deflection is .35".
- Multiply by factors from Table above.  
Load = 680# x 1.30 = 884#  
Deflection = .35" x .92 = .32"

### EXAMPLE II

#### PROBLEM:

Determine load and deflection of a P 5500 cantilever beam with a concentrated load on the end.



#### SOLUTION:

- From load table P5500 on page 57 load for a 3'-0" span is 2190# and deflection is .09".
- Multiply by factors from Table above.  
Load = 2190# x .12 = 263#  
Deflection = .09" x 3.20 = .29"

# GUIDE SPECIFICATION

## PART I - GENERAL

### 1.01 SCOPE OF WORK

- A. Provide all Unistrut Metal Framing material, fittings and related accessories (Strut System) as indicated on the Contract Drawings.
- B. Provide all labor, supervision, engineering, and fabrication required for installation of the Strut System in accordance with the Contract Drawings and as specified herein.
- C. Related work specified elsewhere.

### 1.02 QUALITY ASSURANCE

- A. Manufacturer's qualifications:
  1. The manufacturer shall not have had less than 10 year's experience in manufacturing Strut Systems.
  2. The manufacturer must certify in writing all components supplied have been produced in accordance with an established quality assurance program.
- B. Installer's qualifications:
  1. Installer must be a Unistrut trained manufacturer's authorized representative/installer with not less than 5 years experience in the installation of Strut Systems of this size and conformation.
  2. All Strut System components must be supplied by a single manufacturer.
- C. Standards:

1. Work shall meet the requirements of the following standards.

Federal, State and Local codes.  
American Iron and Steel Institute (AISI) Specification for the Design of Cold-Formed Steel Structural Members August 19, 1986 Edition, December 11, 1989 Addendum.

American Society for Testing And Materials (ASTM).

### 1.03 SUBMITTALS

- A. Structural Calculations and Shop Drawings
  1. Submit structural calculations for approval by the project engineer. Calculations may include, but are not limited to:
    - a. Description of design criteria.
    - b. Stress and deflection analysis.
    - c. Selection of Unistrut framing members, fittings, and accessories.

2. Submit all shop/assembly drawings necessary to completely install the Strut System in compliance with the Contract Drawings.
3. Submit all pertinent manufacturers published data.

### 1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. All material is to be delivered to the work site in original factory packaging to avoid damage to the finish.
- B. Upon delivery to the work site, all components shall be protected from the elements by a shelter or other covering.

### 1.05 GUARANTEE

- A. Separate guarantees shall be issued from the erector and manufacturer, valid for a period of 1 year, against any defects that may arise from the installation or manufacture of the Strut System components.

## PART 2 - PRODUCTS

### 2.01 ACCEPTABLE MANUFACTURERS

- A. All Strut System components shall be as manufactured by UNISTRUT CORPORATION or approved equal as determined by the Architect or Engineer of record in writing 10 days prior to bid date.

### 2.02 MATERIALS

- A. All channel members shall be fabricated from structural grade steel conforming to one of the following ASTM specifications:  
A 570 GR 33, A 653 GR 33
- B. All fittings shall be fabricated from steel conforming to one of the following ASTM specifications:  
A 575, A 576, A 36 or A 635
- C. Substitutions  
Any substitutions of product or manufacturer must be approved in writing ten days prior to bid date, by Architect or Engineer of record.

### 2.03 FINISHES

- A. Strut System components shall be finished in accordance with one of the following standards:
  1. PERMA-GREEN® II (GR)  
Rust inhibiting acrylic enamel paint applied by electro-deposition, after cleaning and phosphating, and thoroughly baked. Color is per Federal

Standard 595a color number 14109 (dark limit V-). Finish to withstand minimum 400 hours salt spray when tested in accordance with ASTM B 117.

2. ELECTRO-GALVANIZED (EG)  
Electrolytically zinc coated per ASTM B 633 Type III SC 1
3. PRE-GALVANIZED (PG)  
Zinc coated by hot-dipped process prior to roll forming. The zinc weight shall be G90 conforming to ASTM A 653.
4. HOT-DIPPED GALVANIZED (HG)  
Zinc coated after all manufacturing operations are complete. Coating shall conform to ASTM A 123 or A 153.
5. SPECIAL COATING / MATERIAL  
(Describe as applicable)

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. The installer shall inspect the work area prior to installation. If work area conditions are unsatisfactory, installation shall not proceed until satisfactory corrections are completed.

### 3.02 INSTALLATION

- A. Installation shall be accomplished by a fully trained manufacturer authorized installer.
- B. Set Strut System components into final position true to line, level and plumb, in accordance with approved shop drawings.
- C. Anchor material firmly in place. Tighten all connections to their recommended torques.

### 3.03 CLEANUP

- A. Upon completion of this section of work, remove all protective wraps and debris. Repair any damage due to installation of this section of work.

### 3.04 PROTECTION

- A. During installation, it shall be the responsibility of the installer to protect this work from damage.
- B. Upon completion of this scope of work, it shall become the responsibility of the general contractor to protect this work from damage during the remainder of construction on the project and until substantial completion.

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<b>P1000</b> 12 Gage	23
<b>P1100</b> 14 Gage	32
<b>P2000</b> 16 Gage	36
<b>P3000</b> 12 Gage	40
<b>P3300</b> 12 Gage	43
<b>P4000</b> 16 Gage	46
<b>P4100</b> 14 Gage	50
<b>P5000</b> 12 Gage	53
<b>P5500</b> 12 Gage	56
<b>Closure Strips</b>	59
<b>Pierced Sections</b>	60
<b>P9000 Series</b> 12 Gage	62



## MATERIAL

Unistrut channels are accurately and carefully cold formed to size from low-carbon strip steel.

Spot-welded combination members are welded 3" (maximum) on center.

### STEEL: PLAIN

12 Ga. (2.7 mm), 14 Ga. (1.9 mm)  
ASTM A570 GR 33  
16 Ga. (1.5 mm) ASTM A366

### STEEL: PRE-GALVANIZED

12 Ga. (2.7 mm), 14 Ga. (1.9 mm)  
and 16 Ga. (1.5mm) ASTM A653  
GR 33

For other materials, see Special Metals and Fiberglass section.

## FINISHES

All channels are available in: Perma Green II (GR), pre-galvanized (PG), conforming to ASTM A653; Hot-dipped galvanized (HG), conforming to ASTM A123 or A153; and plain (PL).

## STANDARD LENGTHS

Standard lengths are 10 feet (3.05m) and 20 feet (6.10m). Tolerances are + $\frac{1}{8}$ " (3.2 mm) to + $\frac{1}{2}$ " (12.7 mm) to allow for cutting. Special lengths are available for a small cutting charge with a tolerance of  $\pm\frac{1}{8}$ " (3.2mm).

## CURVED CHANNEL

Many Unistrut 1 $\frac{5}{8}$ " (41mm) channel sections are available as curved pieces in both single and combination styles. Contact your local Unistrut Service Center or Unistrut Corporation for ordering information.

## DIMENSIONS

Imperial dimensions are illustrated in inches. Metric dimensions are shown in millimeters and rounded to one decimal place.

## LOAD DATA

All beam and column load data pertains to carbon steel and stainless steel channels. Load tables and charts are constructed to be in accordance with the SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS AUGUST 19, 1986 EDITION with DECEMBER 11, 1989 ADDENDUM published by the AMERICAN IRON AND STEEL INSTITUTE.

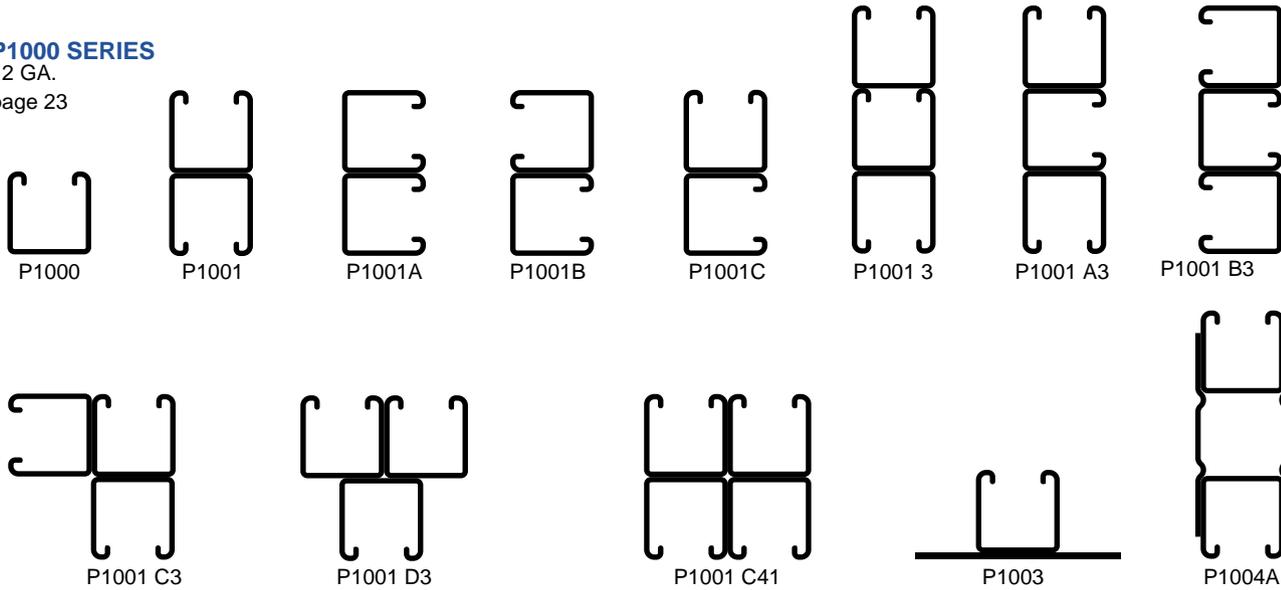
# CHANNELS & COMBINATIONS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



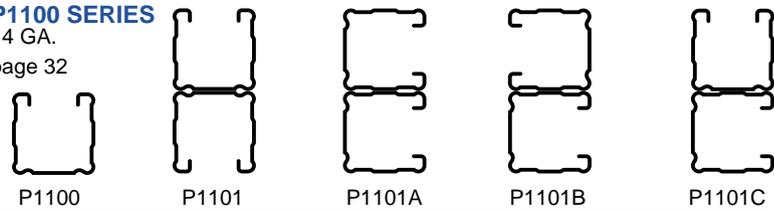
## P1000 SERIES

12 GA.  
page 23



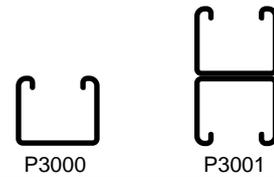
## P1100 SERIES

14 GA.  
page 32



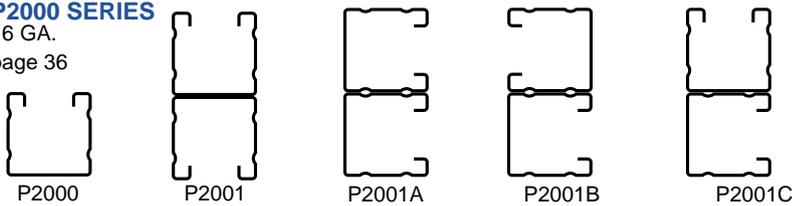
## P3000 SERIES

12 GA.  
page 40



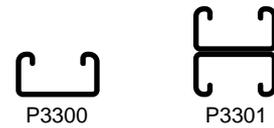
## P2000 SERIES

16 GA.  
page 36



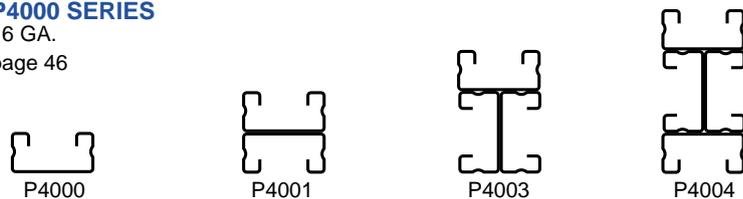
## P3300 SERIES

12 GA.  
page 43



## P4000 SERIES

16 GA.  
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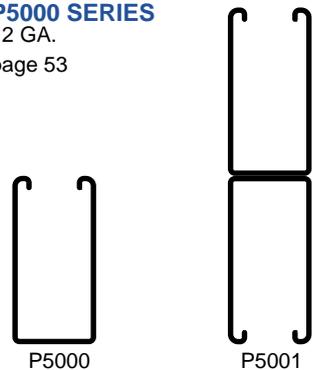
## P4100 SERIES

14 GA.  
page 50



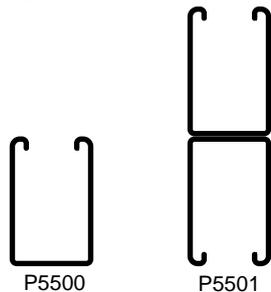
## P5000 SERIES

12 GA.  
page 53



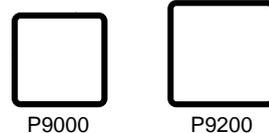
## P5500 SERIES

12 GA.  
page 56



## P9000 SERIES

12 GA.  
page 62



See page 180 for 1-1/4" width channels and combinations and page 198 for 1 3/16" channels and combinations.

Combinations not shown in catalog are available on special order. Consult factory for details.

# CHANNELS & COMBINATIONS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## CHANNEL SELECTION CHART

Channel	Channel Dimensions				Material & Thickness			Hole Pattern Styles					
	Width		Height		Steel	Stain- less Steel	Alum.	KO	T	SL	HS	DS	H3
	In	mm	In	mm									
<b>P1000</b>	1 5/8	41	1 5/8	41	12 ga	12 ga	.109	■	■	■	■	■*	■*
<b>P1100</b>	1 5/8	41	1 5/8	41	14 ga	14 ga	—	■	■	■	■		
<b>P2000</b>	1 5/8	41	1 5/8	41	16 ga	—	—	■	■	■	■		
<b>P3000</b>	1 5/8	41	1 3/8	35	12 ga	—	—	■	■	■	■		
<b>P3300</b>	1 5/8	41	7/8	22	12 ga	12 ga	—		■	■	■		
<b>P4000</b>	1 5/8	41	13/16	21	16 ga	16 ga	.078		■	■	■		
<b>P4100</b>	1 5/8	41	13/16	21	14 ga	—	—		■	■	■		
<b>P5000</b>	1 5/8	41	3/4	83	12 ga	—	—	■	■	■	■		
<b>P5500</b>	1 5/8	41	27/16	62	12 ga	—	.109	■	■	■	■		

- This reference chart reflects the available channels and hole patterns manufactured by Unistrut Corporation.
- Stainless steel sections are also available on special order in "T," "SL" and "HS" hole pattern.
- Metric equivalent for material thickness: 12 ga. (2.7 mm); 14 ga. (1.9 mm); and 16 ga. (1.5 mm).

\* Not available in aluminum.

## CHANNELS & COMBINATIONS IN DESCENDING ORDER OF STRENGTH

Channel	S in <sup>3</sup>	I in <sup>4</sup>	Area in <sup>2</sup>	Weight Lbs/Ft
<b>P5001</b>	1.716*	5.578*	1.794	6.10
<b>P1004 A</b>	1.673	4.079	1.978	6.70
<b>P5501</b>	1.153	2.811	1.453	4.94
<b>P1001 C41</b>	1.145	1.860	2.223	7.60
<b>P5000</b>	.628	1.099	.897	3.05
<b>P1001</b>	.572	.930	1.112	3.80
<b>P1101</b>	.456	.741	.834	2.84
<b>P3001</b>	.431	.593	1.007	3.40
<b>P5500</b>	.391	.523	.726	2.47
<b>P2001</b>	.379	.616	.681	2.32
<b>P9200</b>	.297	.278	.489	2.23

Channel	S in <sup>3</sup>	I in <sup>4</sup>	Area in <sup>2</sup>	Weight Lbs/Ft
<b>P9000</b>	.203	.164	.384	2.05
<b>P3301</b>	.202	.177	.797	2.70
<b>P1000</b>	.202	.185	.556	1.90
<b>P1100</b>	.166	.149	.417	1.42
<b>P3000</b>	.154	.121	.503	1.70
<b>P4101</b>	.141	.114	.574	1.94
<b>P2000</b>	.140	.124	.340	1.16
<b>P4001</b>	.125	.101	.478	1.64
<b>P3300</b>	.072	.037	.398	1.35
<b>P4100</b>	.053	.025	.287	.97
<b>P4000</b>	.048	.023	.239	.82

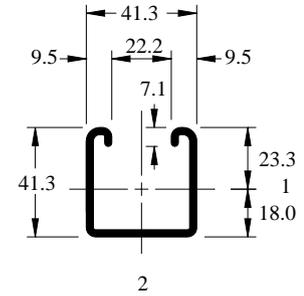
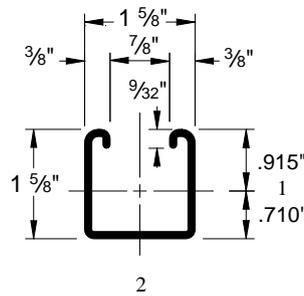
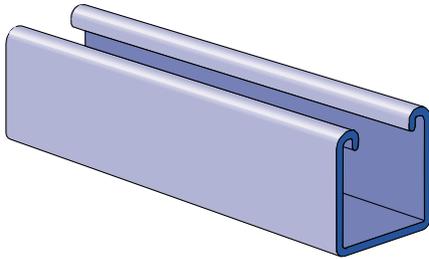
\* Effective section properties.

# P1000® & P1001 CHANNELS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



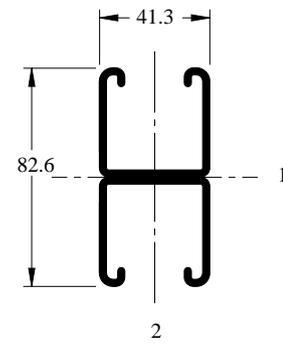
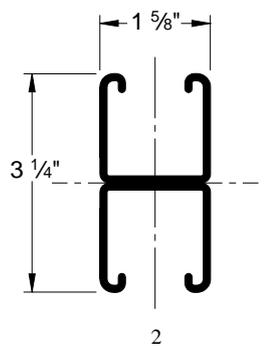
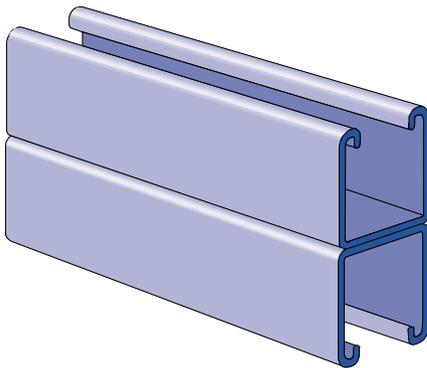
## P1000



Pierced channels are found on pages 60 and 61.

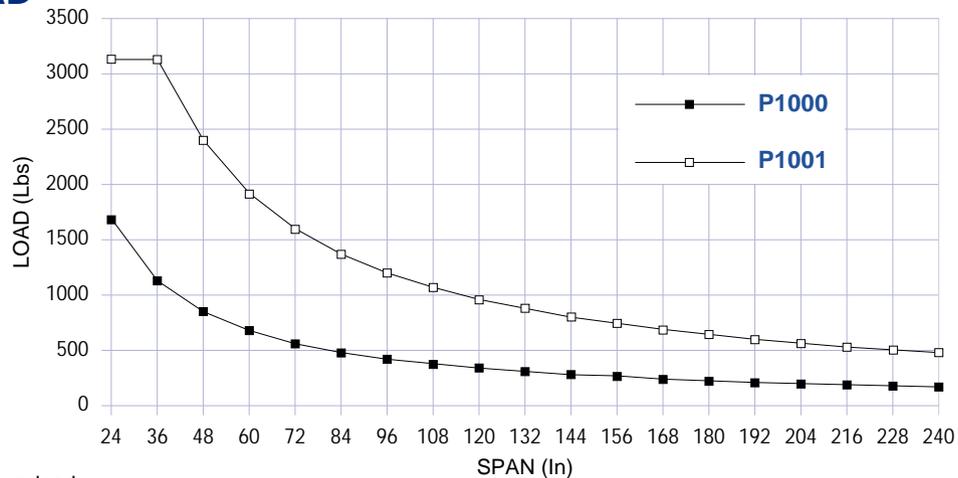
Weight: 190 Lbs/C Ft (283 kg/100 m)

## P1001



Weight: 380 Lbs/C Ft (566 kg/100 m)

## BEAM LOAD\*



\*Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N*m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P1000	1.90	2.8	5,080	570	.105	2.7	■	■	■	■	■	■	■	■
P1001	3.80	5.7	14,390	1630	.105	2.7	■	■	■	■	■	■	■	■

Nominal thickness of 12 gage strip steel is .105 inches.

# P1000 & P1001 CHANNELS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P1000	1690	7.5	0.06	1	1690	7.5	1690	7.5	1690	7.5
		P1001	3130*	13.9	0.02	1	3130*	13.9	3130*	13.9	3130*	13.9
36	914	P1000	1130	5.0	0.13	3	1130	5.0	1130	5.0	900	4.0
		P1001	3130*	13.9	0.07	2	3130*	13.9	3130*	13.9	3130*	13.9
48	1219	P1000	850	3.8	0.22	6	850	3.8	760	3.4	510	2.3
		P1001	2400	10.7	0.13	3	2400	10.7	2400	10.7	2400	10.7
60	1524	P1000	680	3.0	0.35	9	650	2.9	490	2.2	320	1.4
		P1001	1920	8.5	0.20	5	1920	8.5	1920	8.5	1630	7.3
72	1829	P1000	560	2.5	0.50	13	450	2.0	340	1.5	220	1.0
		P1001	1600	7.1	0.28	7	1600	7.1	1600	7.1	1130	5.0
84	2134	P1000	480	2.1	0.68	17	330	1.5	250	1.1	170	0.8
		P1001	1370	6.1	0.39	10	1370	6.1	1240	5.5	830	3.7
96	2438	P1000	420	1.9	0.89	23	250	1.1	190	0.8	130	0.6
		P1001	1200	5.3	0.50	13	1200	5.3	950	4.2	640	2.8
108	2743	P1000	380	1.7	1.14	29	200	0.9	150	0.7	100	0.4
		P1001	1070	4.8	0.64	16	1000	4.4	750	3.3	500	2.2
120	3048	P1000	340	1.5	1.40	36	160	0.7	120	0.5	80	0.4
		P1001	960	4.3	0.79	20	810	3.6	610	2.7	410	1.8
144	3658	P1000	280	1.2	1.99	51	110	0.5	80	0.4	60	0.3
		P1001	800	3.6	1.13	29	560	2.5	420	1.9	280	1.2
168	4267	P1000	240	1.1	2.72	69	80	0.4	60	0.3	40	0.2
		P1001	690	3.1	1.55	39	410	1.8	310	1.4	210	0.9
192	4877	P1000	210	0.9	3.55	90	60	0.3	50	0.2	NR	NR
		P1001	600	2.7	2.02	51	320	1.4	240	1.1	160	0.7
216	5486	P1000	190	0.8	4.57	116	50	0.2	40	0.2	NR	NR
		P1001	530	2.4	2.53	64	250	1.1	190	0.8	130	0.6
240	6096	P1000	170	0.8	5.61	142	40	0.2	NR	NR	NR	NR
		P1001	480	2.1	3.15	80	200	0.9	150	0.7	100	0.4

\*Load limited by spot weld shear.

NR = Not Recommended

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

# P1000 & P1001 CHANNELS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P1000	3400	15.1	9600	42.7	9500	42.3	9320	41.5	9100	40.5
		P1001	6360	28.3	23820	106.0	23560	104.8	23130	102.9	22610	100.6
36	914	P1000	3000	13.3	7640	34.0	7400	32.9	7000	31.1	6490	28.9
		P1001	6190	27.5	23190	103.2	22610	100.6	21640	96.3	20460	91.0
48	1219	P1000	2570	11.4	5910	26.3	5530	24.6	4980	22.2	4430	19.7
		P1001	5970	26.6	22310	99.2	21270	94.6	19560	87.0	17460	77.7
60	1524	P1000	2230	9.9	4780	21.3	4390	19.5	3850	17.1	3330	14.8
		P1001	5690	25.3	21180	94.2	19560	87.0	16870	75.0	13590	60.5
72	1829	P1000	1970	8.8	4090	18.2	3680	16.4	3140	14.0	2650	11.8
		P1001	5360	23.8	19790	88.0	17460	77.7	13590	60.5	9570	42.6
84	2134	P1000	1760	7.8	3600	16.0	3170	14.1	2630	11.7	2160	9.6
		P1001	4970	22.1	18150	80.7	14980	66.6	10130	45.1	7030	31.3
96	2438	P1000	1580	7.0	3220	14.3	2770	12.3	2240	10.0	1800	8.0
		P1001	4510	20.1	16270	72.4	12120	53.9	7750	34.5	5380	23.9
108	2743	P1000	1430	6.4	2910	12.9	2450	10.9	1930	8.6	**	**
		P1001	4030	17.9	14120	62.8	9570	42.6	6130	27.3	4250	18.9
120	3048	P1000	1290	5.7	2640	11.7	2180	9.7	**	**	**	**
		P1001	3610	16.1	11750	52.3	7750	34.5	4960	22.1	**	**

\*\* $\frac{KL}{r} > 200$

## ELEMENTS OF SECTION

Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In <sup>2</sup>	cm <sup>2</sup>	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm
P1000	.556	3.6	.185	7.7	.202	3.3	.577	1.5	.236	9.8	.290	4.7	.651	1.7
P1001	1.112	7.2	.930	38.7	.572	9.4	.915	2.3	.472	19.6	.580	9.5	.651	1.7

I - Moment of Inertia

S - Section Modulus

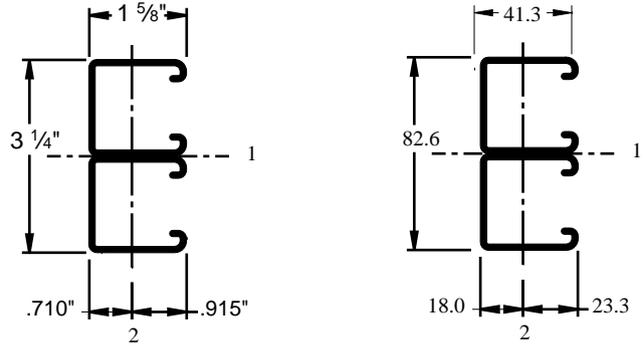
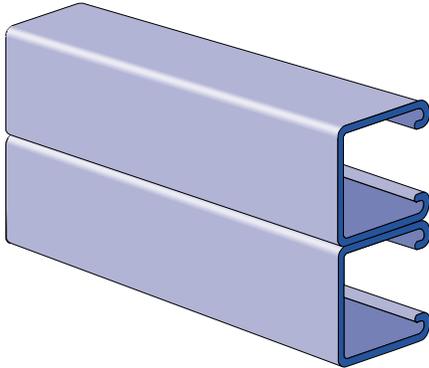
r - Radius of Gyration

# P1000 CHANNEL COMBINATIONS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

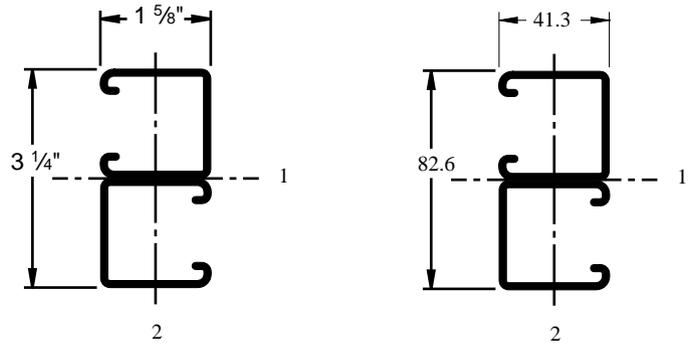
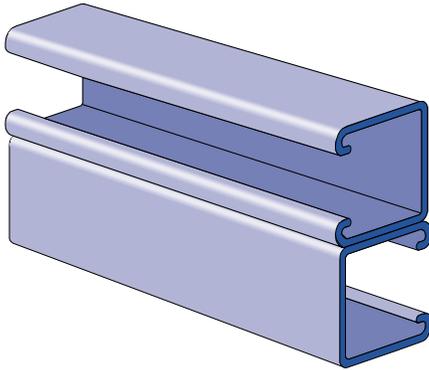


## P1001 A



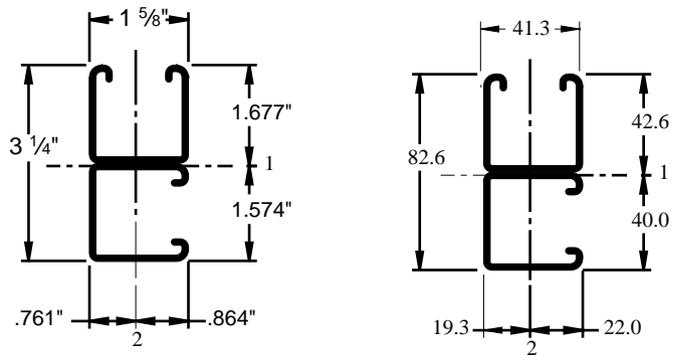
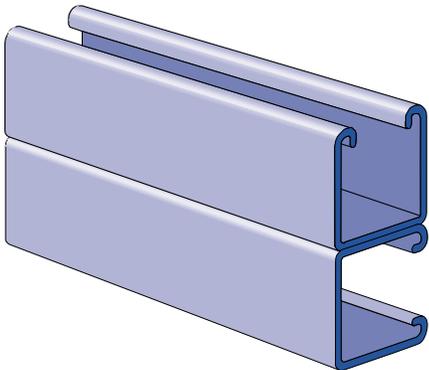
Weight: 380 Lbs/C Ft (566 kg/100 m)

## P1001 B



Weight: 380 Lbs/C Ft (566 kg/100 m)

## P1001 C



Weight: 380 Lbs/C Ft (566 kg/100 m)

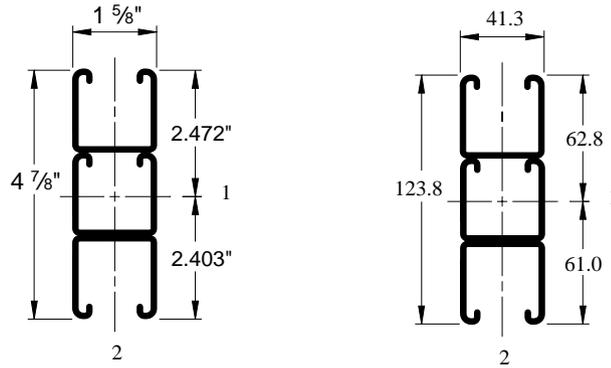
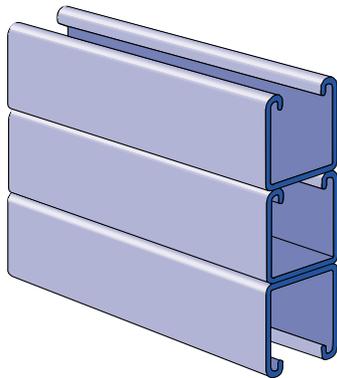
Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N*m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P1001 A	3.80	5.7	18,660	2110	.105	2.7	■	■	■	■	■	■		
P1001 B	3.80	5.7	18,660	2110	.105	2.7	■	■	■	■	■	■		
P1001 C	3.80	5.7	15,970	1800	.105	2.7	■	■	■	■	■	■		

# P1000 CHANNEL COMBINATIONS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

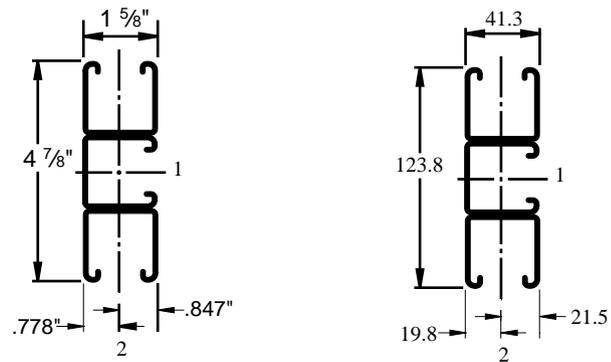
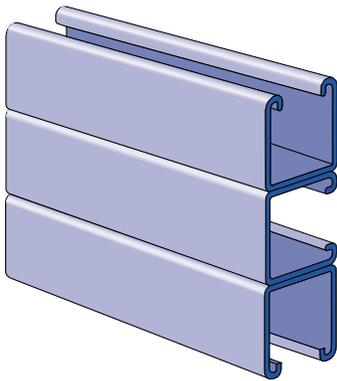


## P1001 3



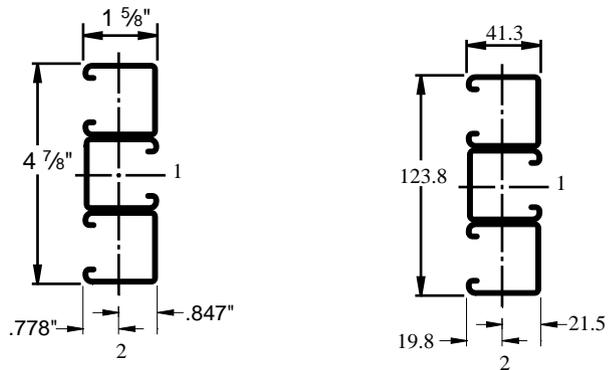
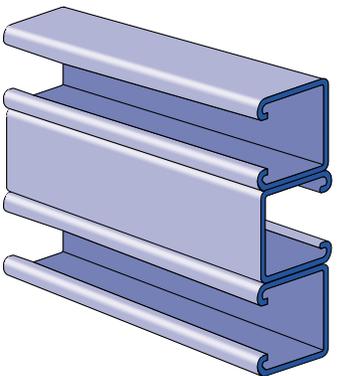
Weight: 570 Lbs/C Ft (848 kg/100 m)

## P1001 A3



Weight: 570 Lbs/C Ft (848 kg/100 m)

## P1001 B3



Weight: 570 Lbs/C Ft (848 kg/100 m)

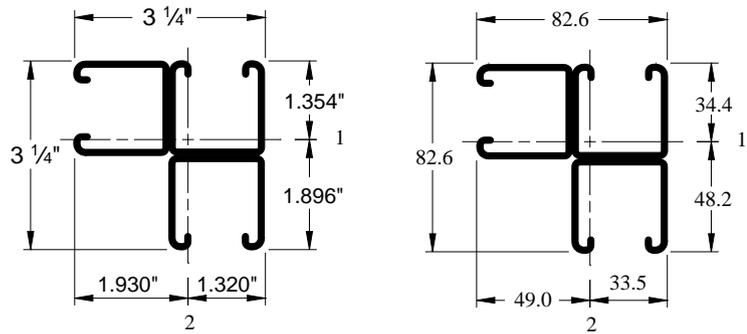
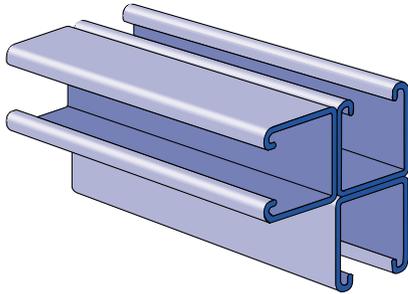
Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N*m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P1001 3	5.70	8.5	31,890	3600	.105	2.7	■	■	■	■	■	■		
P1001 A3	5.70	8.5	32,820	3710	.105	2.7	■	■	■	■	■	■		
P1001 B3	5.70	8.5	37,570	4240	.105	2.7	■	■	■	■	■	■		

# P1000 CHANNEL COMBINATIONS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

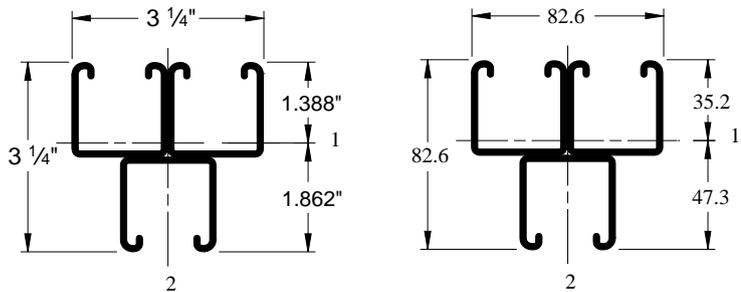
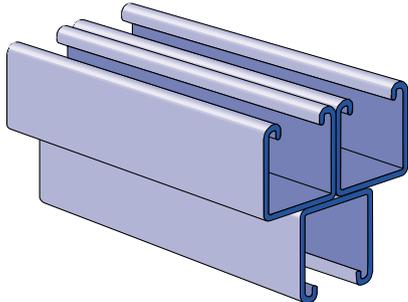


## P1001 C3



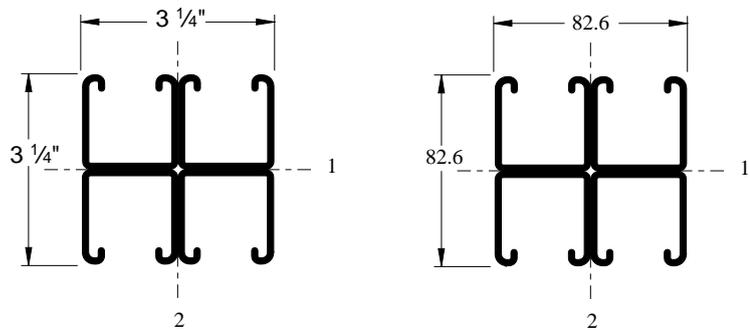
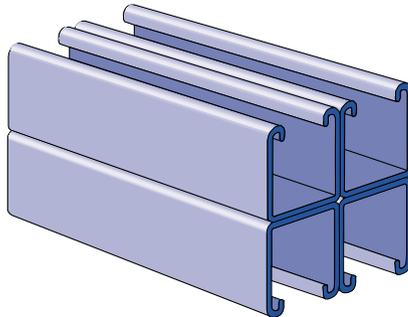
Weight: 570 Lbs/C Ft (848 kg/100 m)

## P1001 D3



Weight: 570 Lbs/C Ft (848 kg/100 m)

## P1001 C41



Weight: 760 Lbs/C Ft (1131 kg/100 m)

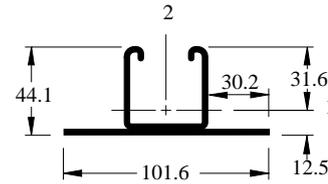
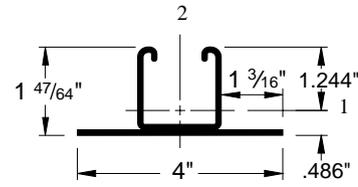
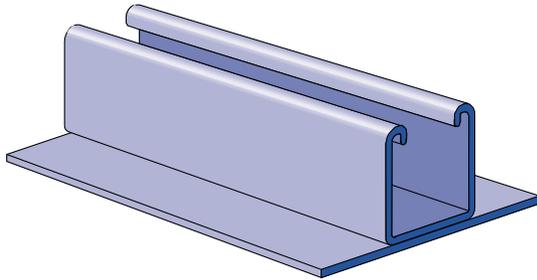
Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P1001 C3	5.70	8.5	18,710	2110	.105	2.7	■	■	■	■	■	■		
P1001 D3	5.70	8.5	17,580	1990	.105	2.7	■	■	■	■	■	■		
P1001 C41	7.60	11.3	28,800	3250	.105	2.7	■	■	■	■	■	■		

# P1000 CHANNEL COMBINATIONS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

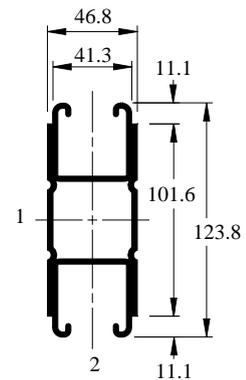
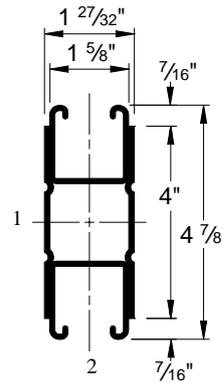
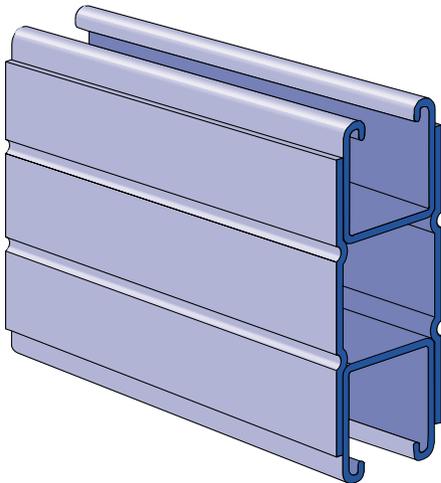


## P1003



Weight: 332 Lbs/C Ft (494 kg/100 m)

## P1004 A



Weight: 670 Lbs/C Ft (997 kg/100 m)

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N*m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P1003	3.32	5.0	6,560	740	.105	2.7	■	■	■	■		■		
P1004 A	6.70	10.0	42,080	4750	.105	2.7	■	■	■	■	■	■		

# P1000 CHANNEL COMBINATIONS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P1004 A P1001C41	9350*†	41.6	0.01	0	9350*†	41.6	9350*†	41.6	9350*†	41.6
			6270*	27.9	0.02	1	6270*	27.9	6270*	27.9	6270*	27.9
36	914	P1004 A P1001C41	9350*†	41.6	0.05	1	9350*†	41.6	9350*†	41.6	9350*†	41.6
			6270*	27.9	0.07	2	6270*	27.9	6270*	27.9	6270*	27.9
48	1219	P1004 A P1001C41	7010	31.2	0.08	2	7010	31.2	7010	31.2	7010	31.2
			4800	21.4	0.13	3	4800	21.4	4800	21.4	4800	21.4
60	1524	P1004 A P1001C41	5610	25.0	0.13	3	5610	25.0	5610	25.0	5610	25.0
			3840	17.1	0.20	5	3840	17.1	3840	17.1	3250	14.5
72	1829	P1004 A P1001C41	4680	20.8	0.19	5	4680	20.8	4680	20.8	4680	20.8
			3200	14.2	0.28	7	3200	14.2	3200	14.2	2260	10.1
84	2134	P1004 A P1001C41	4010	17.8	0.26	7	4010	17.8	4010	17.8	3640	16.2
			2740	12.2	0.39	10	2740	12.2	2490	11.1	1660	7.4
96	2438	P1004 A P1001C41	3510	15.6	0.34	9	3510	15.6	3510	15.6	2790	12.4
			2400	10.7	0.50	13	2400	10.7	1910	8.5	1270	5.6
108	2743	P1004 A P1001C41	3120	13.9	0.43	11	3120	13.9	3120	13.9	2200	9.8
			2130	9.5	0.64	16	2010	8.9	1510	6.7	1000	4.4
120	3048	P1004 A P1001C41	2810	12.5	0.53	13	2810	12.5	2670	11.9	1780	7.9
			1920	8.5	0.79	20	1630	7.3	1220	5.4	810	3.6
144	3658	P1004 A P1001C41	2340	10.4	0.76	19	2340	10.4	1860	8.3	1240	5.5
			1600	7.1	1.13	29	1130	5.0	850	3.8	560	2.5
168	4267	P1004 A P1001C41	2000	8.9	1.03	26	1820	8.1	1360	6.0	910	4.0
			1370	6.1	1.54	39	830	3.7	620	2.8	410	1.8
192	4877	P1004 A P1001C41	1750	7.8	1.34	34	1390	6.2	1040	4.6	700	3.1
			1200	5.3	2.02	51	640	2.8	480	2.1	320	1.4
216	5486	P1004 A P1001C41	1560	6.9	1.70	43	1100	4.9	830	3.7	550	2.4
			1070	4.8	2.56	65	500	2.2	380	1.7	250	1.1
240	6096	P1004 A P1001C41	1400	6.2	2.09	53	890	4.0	670	3.0	450	2.0
			960	4.3	3.15	80	410	1.8	300	1.3	200	0.9

\*Load limited by spot weld shear. †Bearing load may govern capacity. See page 67.

Notes:

- Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
- Long span beams should be supported in such a manner as to prevent rotation and twist.
- Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
- See page 66 for lateral bracing load reduction charts.

# P1000 CHANNEL COMBINATIONS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P1004 A P1001C41	12190	54.2	42600	189.5	42250	187.9	41680	185.4	40990	182.3
			12770	56.8	48120	214.0	47860	212.9	47420	210.9	46890	208.6
36	914	P1004 A P1001C41	12010	53.4	41760	185.8	40990	182.3	39700	176.6	38130	169.6
			12510	55.6	47480	211.2	46890	208.6	45910	204.2	44720	198.9
48	1219	P1004 A P1001C41	11750	52.3	40590	180.6	39210	174.4	36930	164.3	34140	151.9
			12160	54.1	46590	207.2	45540	202.6	43800	194.8	41680	185.4
60	1524	P1004 A P1001C41	11420	50.8	39080	173.8	36930	164.3	33360	148.4	29000	129.0
			11730	52.2	45440	202.1	43800	194.8	41090	182.8	37770	168.0
72	1829	P1004 A P1001C41	11010	49.0	37240	165.7	34140	151.9	29000	129.0	22730	101.1
			11230	50.0	44040	195.9	41680	185.4	37770	168.0	32990	146.7
84	2134	P1004 A P1001C41	10510	46.8	35060	156.0	30840	137.2	23850	106.1	16740	74.5
			10680	47.5	42380	188.5	39170	174.2	33850	150.6	27350	121.7
96	2438	P1004 A P1001C41	9910	44.1	32550	144.8	27040	120.3	18450	82.1	12820	57.0
			10090	44.9	40470	180.0	36270	161.3	29320	130.4	21270	94.6
108	2743	P1004 A P1001C41	9160	40.7	29710	132.2	22730	101.1	14580	64.9	10130	45.1
			9470	42.1	38310	170.4	32990	146.8	24200	107.6	16800	74.7
120	3048	P1004 A P1001C41	8310	37.0	26530	118.0	18450	82.1	11810	52.5	8200	36.5
			8820	39.2	35880	159.6	29320	130.4	19600	87.2	13610	60.5

## ELEMENTS OF SECTION

Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In <sup>2</sup>	cm <sup>2</sup>	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm
P1004 A	1.978	12.8	4.079	169.8	1.673	27.4	1.436	3.6	1.121	46.7	1.204	19.7	.753	1.9
P1001 C41	2.223	14.3	1.860	77.4	1.145	18.8	.915	2.3	2.411	100.4	1.484	24.3	1.041	2.6

I - Moment of Inertia

S - Section Modulus

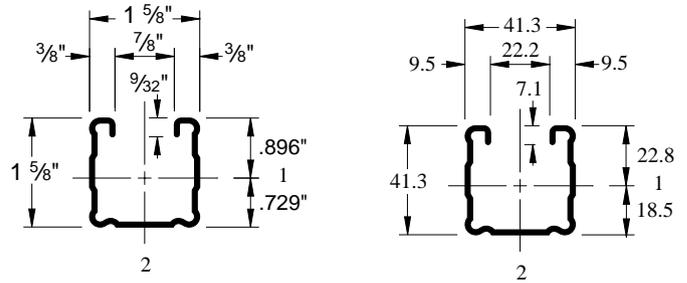
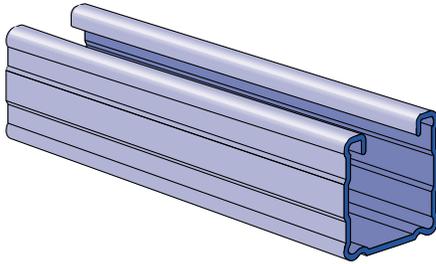
r - Radius of Gyration

# P1100™ & P1101 CHANNELS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



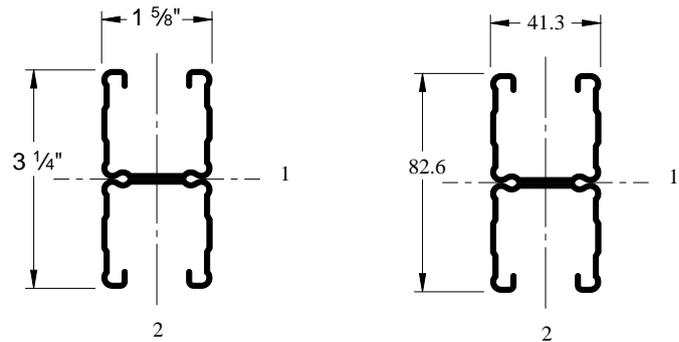
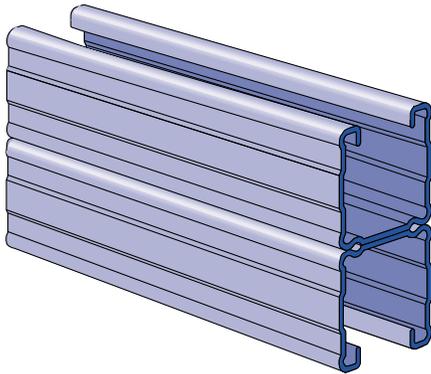
## P1100



Pierced channels are found on pages 60 and 61.

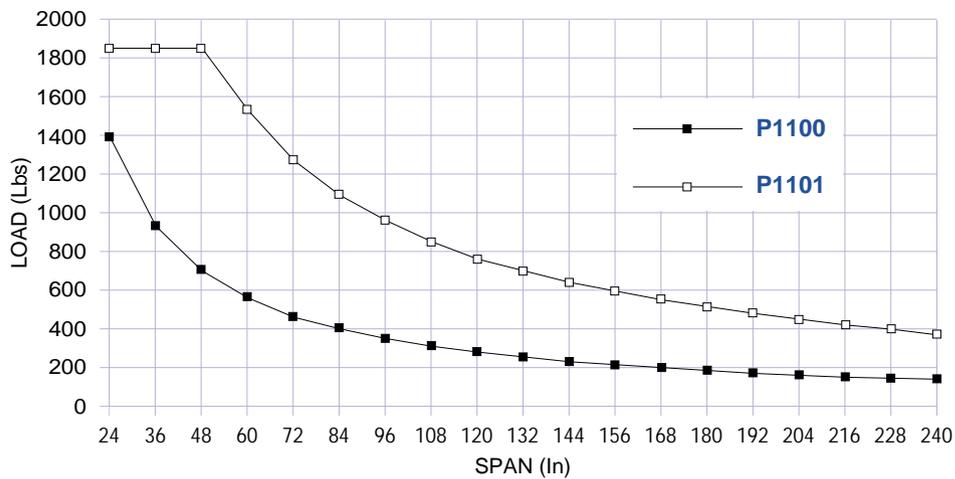
Weight: 142 Lbs/C Ft (211 kg/100 m)

## P1101



Weight: 284 Lbs/C Ft (423 kg/100 m)

## BEAM LOAD\*



\*Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N·m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
<b>P1100</b>	1.42	2.1	4,170	470	.075	1.9	■	■	■	■	■	■	■	
<b>P1101</b>	2.84	4.2	11,470	1300	.075	1.9	■	■	■	■	■	■	■	

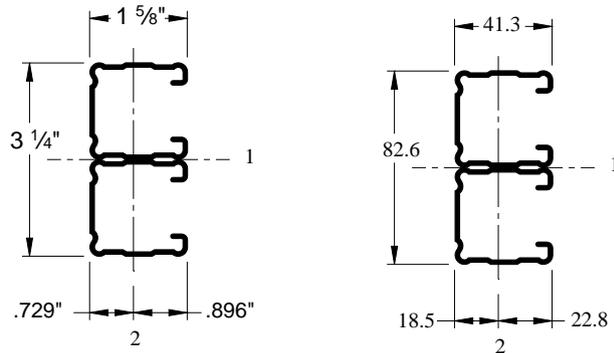
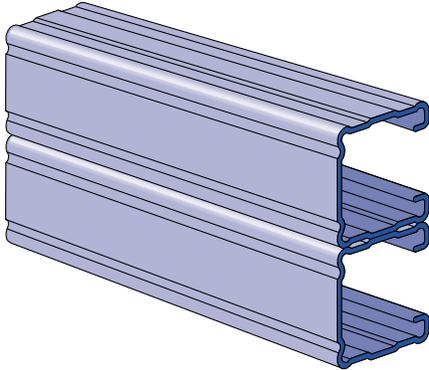
Nominal thickness of 14 gage strip steel is .075 inches.

# P1100 CHANNEL COMBINATIONS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

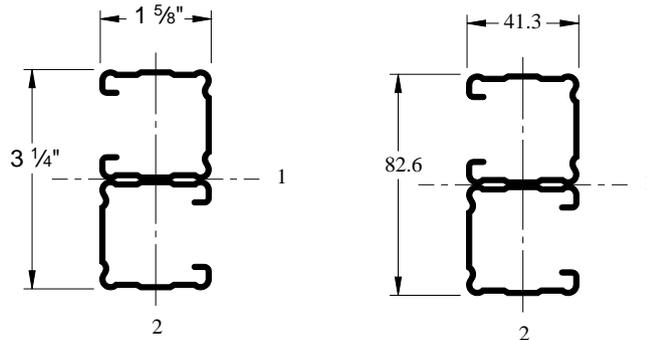
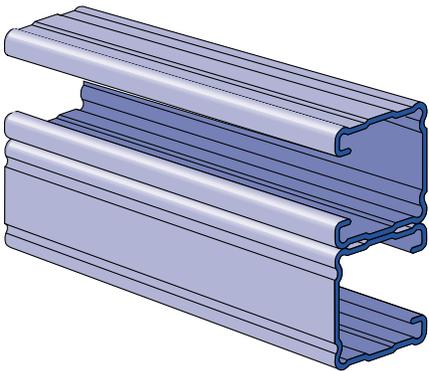


## P1101 A



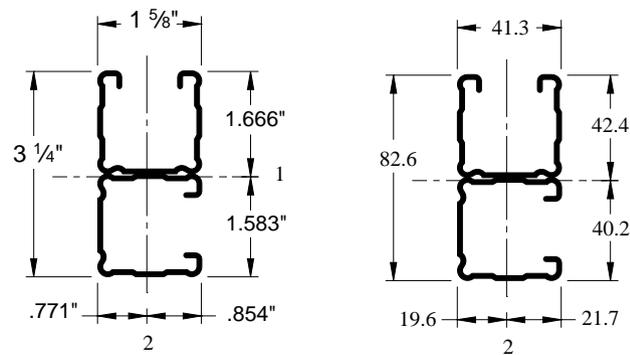
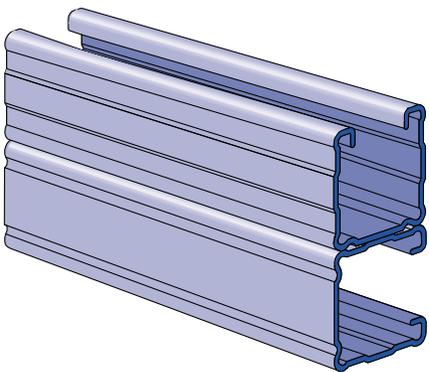
Weight: 284 Lbs/C Ft (423 kg/100 m)

## P1101 B



Weight: 284 Lbs/C Ft (423 kg/100 m)

## P1101 C



Weight: 284 Lbs/C Ft (423 kg/100 m)

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N*m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
<b>P1101 A</b>	2.84	4.2	14,180	1600	.075	1.9	■	■	■	■	■	■		
<b>P1101 B</b>	2.84	4.2	14,180	1600	.075	1.9	■	■	■	■	■	■		
<b>P1101 C</b>	2.84	4.2	12,500	1410	.075	1.9	■	■	■	■	■	■		

# P1100 & P1101 CHANNELS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P1100 P1101	1390	6.2	0.06	1	1390	6.2	1390	6.2	1390	6.2
			1850*	8.2	0.02	1	1850*	8.2	1850*	8.2	1850*	8.2
36	914	P1100 P1101	930	4.1	0.13	3	930	4.1	930	4.1	720	3.2
			1850*	8.2	0.05	1	1850*	8.2	1850*	8.2	1850*	8.2
48	1219	P1100 P1101	700	3.1	0.23	6	700	3.1	610	2.7	410	1.8
			1850*	8.2	0.12	3	1850*	8.2	1850*	8.2	1850*	8.2
60	1524	P1100 P1101	560	2.5	0.36	9	520	2.3	390	1.7	260	1.2
			1530	6.8	0.20	5	1530	6.8	1530	6.8	1300	5.8
72	1829	P1100 P1101	460	2.0	0.51	13	360	1.6	270	1.2	180	0.8
			1270	5.6	0.28	7	1270	5.6	1270	5.6	900	4.0
84	2134	P1100 P1101	400	1.8	0.70	18	270	1.2	200	0.9	130	0.6
			1090	4.8	0.38	10	1090	4.8	990	4.4	660	2.9
96	2438	P1100 P1101	350	1.6	0.92	23	200	0.9	150	0.7	100	0.4
			960	4.3	0.51	13	960	4.3	760	3.4	510	2.3
108	2743	P1100 P1101	310	1.4	1.16	29	160	0.7	120	0.5	80	0.4
			850	3.8	0.64	16	800	3.6	600	2.7	400	1.8
120	3048	P1100 P1101	280	1.2	1.43	36	130	0.6	100	0.4	70	0.3
			760	3.4	0.78	20	650	2.9	490	2.2	320	1.4
144	3658	P1100 P1101	230	1.0	2.03	52	90	0.4	70	0.3	50	0.2
			640	2.8	1.14	29	450	2.0	340	1.5	220	1.0
168	4267	P1100 P1101	200	0.9	2.81	71	70	0.3	50	0.2	30	0.1
			550	2.4	1.55	39	330	1.5	250	1.1	170	0.8
192	4877	P1100 P1101	170	0.8	3.56	91	50	0.2	40	0.2	30	0.1
			480	2.1	2.02	51	250	1.1	190	0.8	130	0.6
216	5486	P1100 P1101	150	0.7	4.48	114	40	0.2	30	0.1	NR	NR
			420	1.9	2.52	64	200	0.9	150	0.7	100	0.4
240	6096	P1100 P1101	140	0.6	5.73	146	30	0.1	NR	NR	NR	NR
			380	1.7	3.13	79	160	0.7	120	0.5	80	0.4

\*Load limited by spot weld shear.

NR = Not Recommended

Notes:

- Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
- Long span beams should be supported in such a manner as to prevent rotation and twist.
- Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
- See page 66 for lateral bracing load reduction charts.

## COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	<b>P1100</b>	2720	12.1	7160	31.8	7090	31.5	6960	31.0	6800	30.2
		<b>P1101</b>	4990	22.2	17880	79.5	17690	78.7	17380	77.3	17000	75.6
36	914	<b>P1100</b>	2330	10.4	5360	23.8	5190	23.1	4900	21.8	4530	20.2
		<b>P1101</b>	4860	21.6	17420	77.5	17000	75.6	16300	72.5	15440	68.7
48	1219	<b>P1100</b>	1890	8.4	3730	16.6	3540	15.7	3250	14.5	2940	13.1
		<b>P1101</b>	4690	20.9	16780	74.6	16030	71.3	14780	65.7	13260	59.0
60	1524	<b>P1100</b>	1590	7.1	2880	12.8	2690	12.0	2430	10.8	2160	9.6
		<b>P1101</b>	4470	19.9	15960	71.0	14780	65.7	12840	57.1	10460	46.5
72	1829	<b>P1100</b>	1390	6.2	2390	10.6	2210	9.8	1950	8.7	1710	7.6
		<b>P1101</b>	4210	18.7	14960	66.5	13260	59.0	10460	46.5	7420	33.0
84	2134	<b>P1100</b>	1230	5.5	2070	9.2	1890	8.4	1640	7.3	1400	6.2
		<b>P1101</b>	3920	17.4	13770	61.3	11460	51.0	7850	34.9	5450	24.2
96	2438	<b>P1100</b>	1100	4.9	1850	8.2	1650	7.3	1400	6.2	1180	5.2
		<b>P1101</b>	3560	15.8	12400	55.2	9390	41.8	6010	26.7	4180	18.6
108	2743	<b>P1100</b>	1000	4.4	1670	7.4	1470	6.5	1220	5.4	**	**
		<b>P1101</b>	3180	14.1	10850	48.3	7420	33.0	4750	21.1	3300	14.7
120	3048	<b>P1100</b>	910	4.0	1530	6.8	1330	5.9	**	**	**	**
		<b>P1101</b>	2850	12.7	9110	40.5	6010	26.7	3850	17.1	**	**

\*\* $\frac{KL}{r} > 200$

## ELEMENTS OF SECTION

Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In <sup>2</sup>	cm <sup>2</sup>	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm
<b>P1100</b>	.417	2.7	.149	6.2	.166	2.7	.597	1.5	.183	7.6	.225	3.7	.662	1.7
<b>P1101</b>	.834	5.4	.741	30.8	.456	7.5	.942	2.4	.366	15.2	.451	7.4	.662	1.7

I - Moment of Inertia

S - Section Modulus

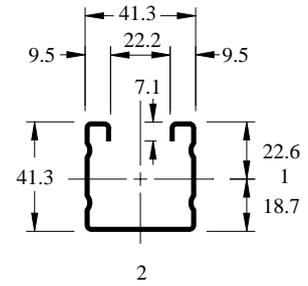
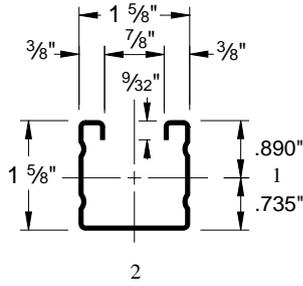
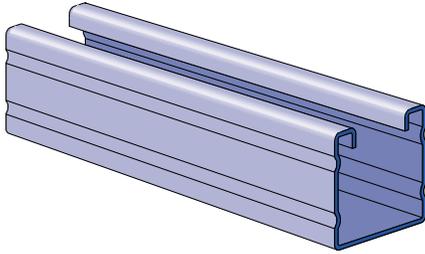
r - Radius of Gyration

# P2000™ & P2001 CHANNELS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



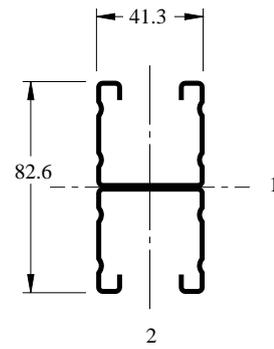
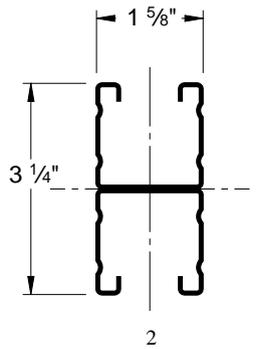
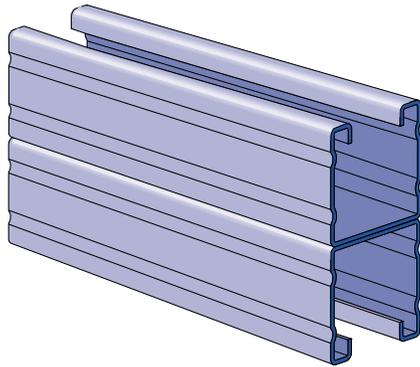
## P2000



Pierced channels are found on pages 60 and 61.

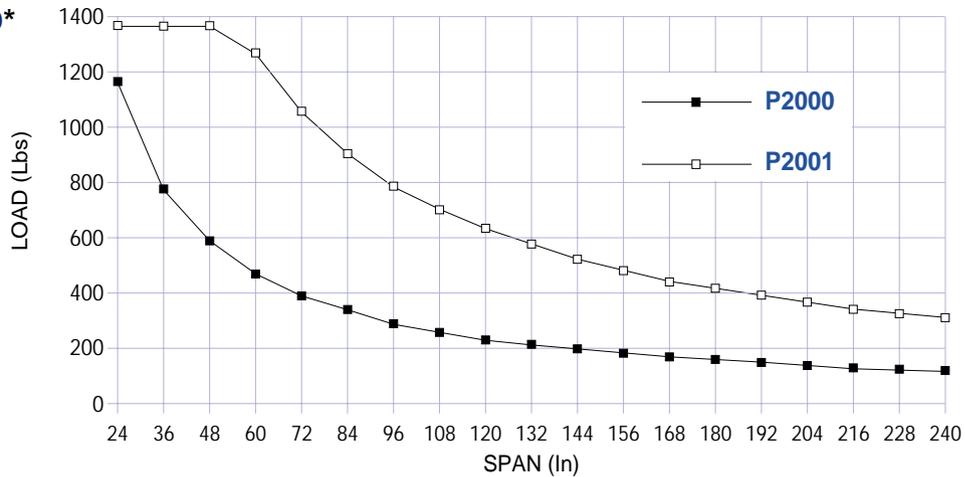
Weight: 116 Lbs/C Ft (173 kg/100 m)

## P2001



Weight: 232 Lbs/C Ft (345 kg/100 m)

## BEAM LOAD\*



\*Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N*m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P2000	1.16	1.7	3,520	400	.060	1.5	■	■	■	■	■	■		
P2001	2.32	3.4	9,530	1080	.060	1.5	■	■	■	■	■	■		

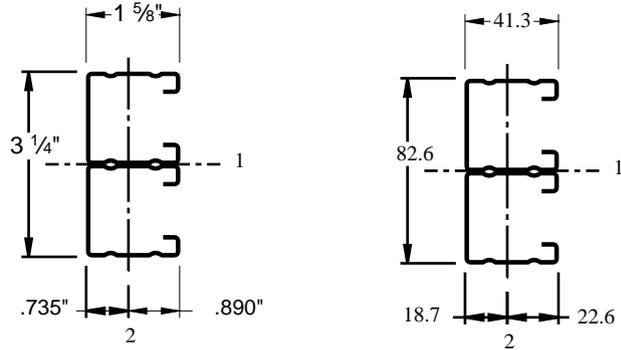
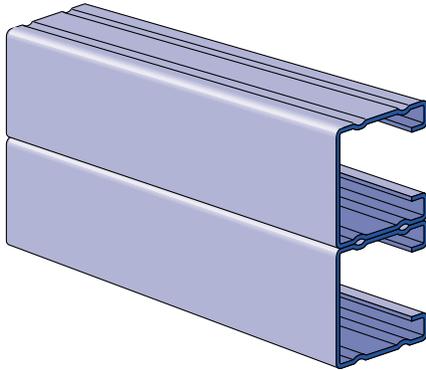
Nominal thickness of 16 gage strip steel is .060 inches.

# P2000 CHANNEL COMBINATIONS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

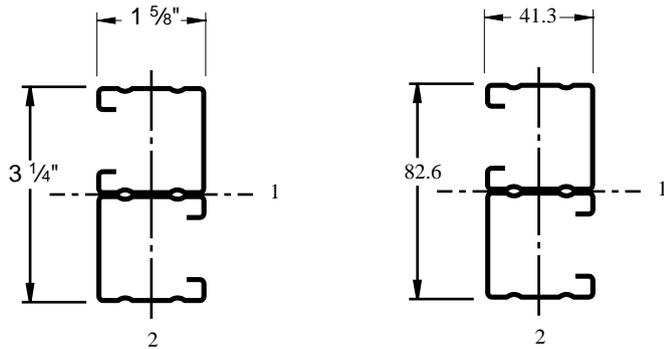
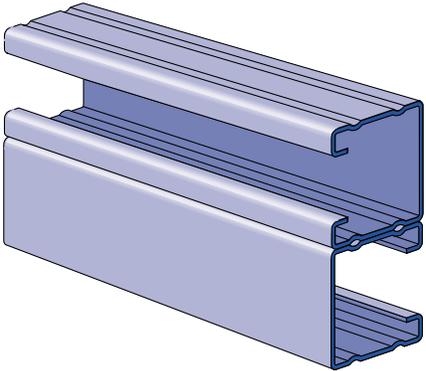


## P2001 A



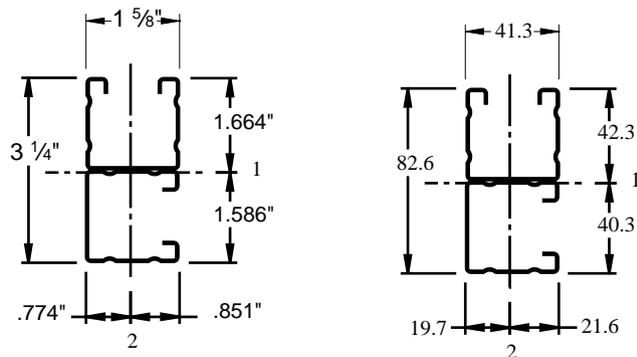
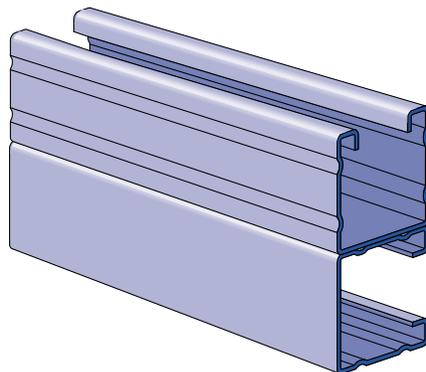
Weight: 232 Lbs/C Ft (345 kg/100 m)

## P2001 B



Weight: 232 Lbs/C Ft (345 kg/100 m)

## P2001 C



Weight: 232 Lbs/C Ft (345 kg/100 m)

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P2001 A	2.32	3.4	11,640	1320	.060	1.5	■	■	■	■	■	■		
P2001 B	2.32	3.4	11,640	1320	.060	1.5	■	■	■	■	■	■		
P2001 C	2.32	3.4	10,340	1170	.060	1.5	■	■	■	■	■	■		

# P2000 & P2001 CHANNELS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P2000	1170	5.2	0.06	1	1170	5.2	1170	5.2	1170	5.2
		P2001	1370*	6.1	0.01	0	1370*	6.1	1370*	6.1	1370*	6.1
36	914	P2000	780	3.5	0.13	3	780	3.5	780	3.5	600	2.7
		P2001	1370*	6.1	0.05	1	1370*	6.1	1370*	6.1	1370*	6.1
48	1219	P2000	590	2.6	0.23	6	590	2.6	510	2.3	340	1.5
		P2001	1370*	6.1	0.11	3	1370*	6.1	1370*	6.1	1370*	6.1
60	1524	P2000	470	2.1	0.36	9	430	1.9	330	1.5	220	1.0
		P2001	1270	5.6	0.20	5	1270	5.6	1270	5.6	1080	4.8
72	1829	P2000	390	1.7	0.52	13	300	1.3	230	1.0	150	0.7
		P2001	1060	4.7	0.28	7	1060	4.7	1060	4.7	750	3.3
84	2134	P2000	340	1.5	0.72	18	220	1.0	170	0.8	110	0.5
		P2001	910	4.0	0.39	10	910	4.0	820	3.6	550	2.4
96	2438	P2000	290	1.3	0.91	23	170	0.8	130	0.6	80	0.4
		P2001	790	3.5	0.50	13	790	3.5	630	2.8	420	1.9
108	2743	P2000	260	1.2	1.17	30	130	0.6	100	0.4	70	0.3
		P2001	710	3.2	0.64	16	660	2.9	500	2.2	330	1.5
120	3048	P2000	230	1.0	1.41	36	110	0.5	80	0.4	50	0.2
		P2001	640	2.8	0.79	20	540	2.4	400	1.8	270	1.2
144	3658	P2000	200	0.9	2.13	54	80	0.4	60	0.3	40	0.2
		P2001	530	2.4	1.13	29	370	1.6	280	1.2	190	0.8
168	4267	P2000	170	0.8	2.87	73	60	0.3	40	0.2	30	0.1
		P2001	450	2.0	1.53	39	270	1.2	210	0.9	140	0.6
192	4877	P2000	150	0.7	3.78	96	40	0.2	30	0.1	NR	NR
		P2001	400	1.8	2.03	52	210	0.9	160	0.7	110	0.5
216	5486	P2000	130	0.6	4.66	118	30	0.1	30	0.1	NR	NR
		P2001	350	1.6	2.53	64	170	0.8	120	0.5	80	0.4
240	6096	P2000	120	0.5	5.90	150	30	0.1	NR	NR	NR	NR
		P2001	320	1.4	3.17	81	130	0.6	100	0.4	70	0.3

\*Load limited by spot weld shear.

NR = Not Recommended

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

# P2000 & P2001 CHANNELS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P2000	2260	10.1	5660	25.2	5600	24.9	5500	24.5	5370	23.9
		P2001	4120	18.3	14600	64.9	14450	64.3	14200	63.2	13900	61.8
36	914	P2000	1750	7.8	3460	15.4	3350	14.9	3170	14.1	2970	13.2
		P2001	4020	17.9	14240	63.3	13900	61.8	13330	59.3	12640	56.2
48	1219	P2000	1230	5.5	1950	8.7	1880	8.4	1780	7.9	1670	7.4
		P2001	3880	17.3	13720	61.0	13120	58.4	12110	53.9	10890	48.4
60	1524	P2000	900	4.0	1250	5.6	1210	5.4	1140	5.1	1070	4.8
		P2001	3700	16.5	13060	58.1	12110	53.9	10550	46.9	8640	38.4
72	1829	P2000	680	3.0	870	3.9	840	3.7	790	3.5	740	3.3
		P2001	3490	15.5	12250	54.5	10890	48.4	8640	38.4	6150	27.4
84	2134	P2000	520	2.3	640	2.8	610	2.7	580	2.6	550	2.4
		P2001	3250	14.5	11300	50.3	9440	42.0	6510	29.0	4520	20.1
96	2438	P2000	410	1.8	490	2.2	470	2.1	450	2.0	420	1.9
		P2001	2960	13.2	10190	45.3	7770	34.6	4990	22.2	3460	15.4
108	2743	P2000	330	1.5	380	1.7	370	1.6	350	1.6	**	**
		P2001	2640	11.7	8950	39.8	6150	27.4	3940	17.5	2740	12.2
120	3048	P2000	280	1.2	310	1.4	300	1.3	290	1.3	**	**
		P2001	2370	10.5	7550	33.6	4990	22.2	3190	14.2	**	**

\*\* $\frac{KL}{r} > 200$

## ELEMENTS OF SECTION

Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In <sup>2</sup>	cm <sup>2</sup>	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm
P2000	.340	2.2	.124	5.2	.140	2.3	.605	1.5	.151	6.3	.186	3.0	.667	1.7
P2001	.681	4.4	.616	25.6	.379	6.2	.951	2.4	.303	12.6	.373	6.1	.667	1.7

I - Moment of Inertia

S - Section Modulus

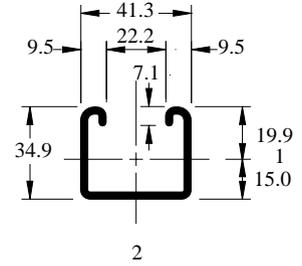
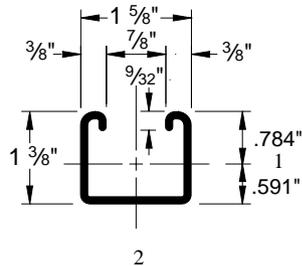
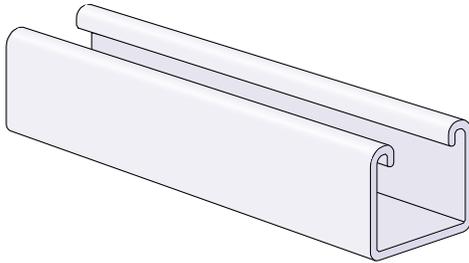
r - Radius of Gyration

# P3000™ & P3001 CHANNELS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



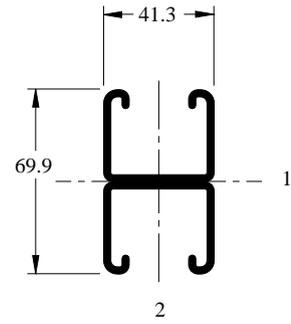
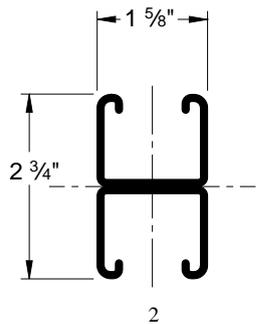
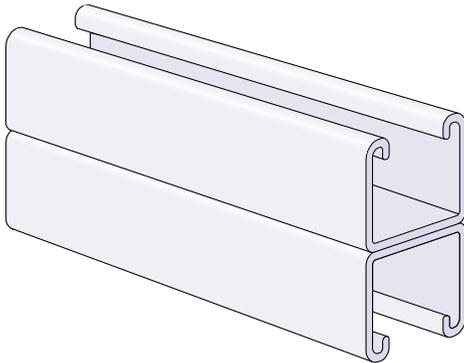
## P3000



Pierced channels are found on pages 60 and 61.

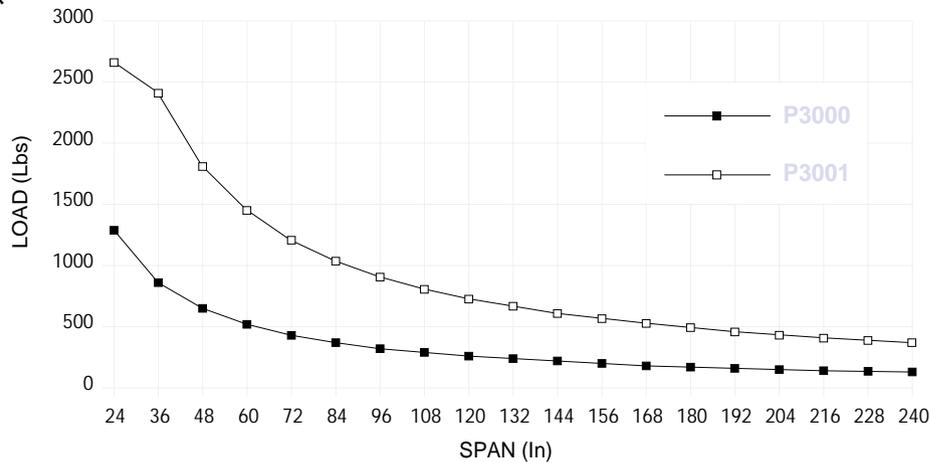
Weight: 170 Lbs/C Ft (253 kg/100 m)

## P3001



Weight: 340 Lbs/C Ft (506 kg/100 m)

## BEAM LOAD\*



\* Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N*m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
<b>P3000</b>	1.70	2.5	3,870	440	.105	2.7	■	■	■	■	■	■	■	
<b>P3001</b>	3.40	5.1	10,840	1220	.105	2.7	■	■	■	■	■	■	■	

Nominal thickness of 12 gage strip steel is .105 inches.

# P3000 & P3001 CHANNELS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P3000	1290	5.7	0.07	2	1290	5.7	1290	5.7	1290	5.7
		P3001	2660*	11.8	0.03	1	2660*	11.8	2660*	11.8	2660*	11.8
36	914	P3000	860	3.8	0.15	4	860	3.8	860	3.8	590	2.6
		P3001	2410	10.7	0.08	2	2410	10.7	2410	10.7	2410	10.7
48	1219	P3000	650	2.9	0.26	7	650	2.9	500	2.2	330	1.5
		P3001	1810	8.1	0.15	4	1810	8.1	1810	8.1	1620	7.2
60	1524	P3000	520	2.3	0.41	10	420	1.9	320	1.4	210	0.9
		P3001	1450	6.4	0.23	6	1450	6.4	1450	6.4	1040	4.6
72	1829	P3000	430	1.9	0.59	15	290	1.3	220	1.0	150	0.7
		P3001	1200	5.3	0.33	8	1200	5.3	1080	4.8	720	3.2
84	2134	P3000	370	1.6	0.80	20	220	1.0	160	0.7	110	0.5
		P3001	1030	4.6	0.45	12	1030	4.6	790	3.5	530	2.4
96	2438	P3000	320	1.4	1.03	26	170	0.8	120	0.5	80	0.4
		P3001	900	4.0	0.59	15	810	3.6	610	2.7	400	1.8
108	2743	P3000	290	1.3	1.33	34	130	0.6	100	0.4	70	0.3
		P3001	800	3.6	0.75	19	640	2.8	480	2.1	320	1.4
120	3048	P3000	260	1.2	1.64	42	110	0.5	80	0.4	50	0.2
		P3001	720	3.2	0.93	24	520	2.3	390	1.7	260	1.2
144	3658	P3000	220	1.0	2.40	61	70	0.3	60	0.3	40	0.2
		P3001	600	2.7	1.33	34	360	1.6	270	1.2	180	0.8
168	4267	P3000	180	0.8	3.11	79	50	0.2	40	0.2	30	0.1
		P3001	520	2.3	1.84	47	260	1.2	200	0.9	130	0.6
192	4877	P3000	160	0.7	4.13	105	40	0.2	30	0.1	NR	NR
		P3001	450	2.0	2.37	60	200	0.9	150	0.7	100	0.4
216	5486	P3000	140	0.6	5.15	131	NR	NR	NR	NR	NR	NR
		P3001	400	1.8	3.00	76	160	0.7	120	0.5	80	0.4
240	6096	P3000	130	0.6	6.56	167	NR	NR	NR	NR	NR	NR
		P3001	360	1.6	3.70	94	130	0.6	100	0.4	60	0.3

\*Load limited by spot weld shear.

NR = Not Recommended

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

# P3000 & P3001 CHANNELS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P3000	3040	13.5	8890	39.5	8800	39.1	8640	38.4	8440	37.5
		P3001	5660	25.2	21550	95.9	21310	94.8	20910	93.0	20410	90.8
36	914	P3000	2720	12.1	7520	33.5	7310	32.5	6930	30.8	6460	28.7
		P3001	5480	24.4	20960	93.2	20410	90.8	19510	86.8	18400	81.8
48	1219	P3000	2390	10.6	6390	28.4	5990	26.6	5310	23.6	4600	20.5
		P3001	5240	23.3	20130	89.5	19160	85.2	17550	78.1	15570	69.3
60	1524	P3000	2090	9.3	5430	24.2	4870	21.7	4130	18.4	3460	15.4
		P3001	4940	22.0	19070	84.8	17550	78.1	15020	66.8	11940	53.1
72	1829	P3000	1830	8.1	4680	20.8	4080	18.1	3340	14.9	2450	10.9
		P3001	4610	20.5	17770	79.0	15570	69.3	11940	53.1	8350	37.1
84	2134	P3000	1610	7.2	4110	18.3	3480	15.5	2600	11.6	**	**
		P3001	4230	18.8	16230	72.2	13240	58.9	8840	39.3	6140	27.3
96	2438	P3000	1420	6.3	3640	16.2	3000	13.3	1990	8.9	**	**
		P3001	3800	16.9	14450	64.3	10570	47.0	6770	30.1	4700	20.9
108	2743	P3000	1230	5.5	3240	14.4	2450	10.9	**	**	**	**
		P3001	3380	15.0	12440	55.3	8350	37.1	5350	23.8	**	**
120	3048	P3000	1070	4.8	2890	12.9	1990	8.9	**	**	**	**
		P3001	3020	13.4	10250	45.6	6770	30.1	4330	19.3	**	**

\*\* $\frac{KL}{r} > 200$

## ELEMENTS OF SECTION

Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In <sup>2</sup>	cm <sup>2</sup>	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm
P3000	.503	3.2	.121	5.0	.154	2.5	.490	1.2	.205	8.5	.253	4.1	.639	1.6
P3001	1.007	6.5	.593	24.7	.431	7.1	.767	1.9	.411	17.1	.506	8.3	.639	1.6

I - Moment of Inertia

S - Section Modulus

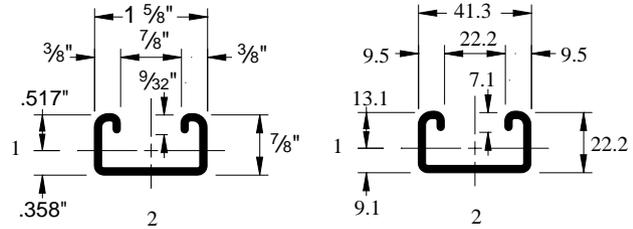
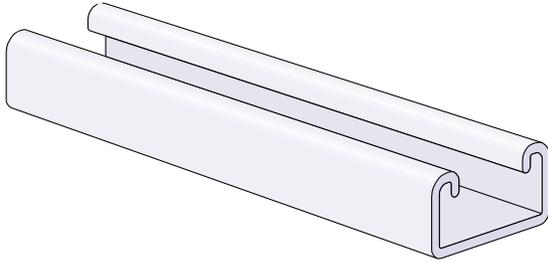
r - Radius of Gyration

# P3300™ & P3301 CHANNELS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



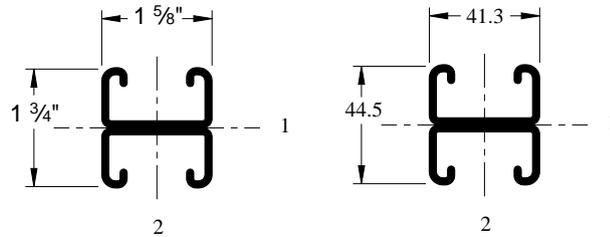
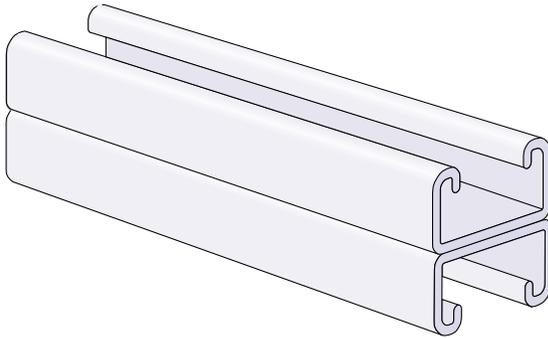
## P3300



Pierced channels are found on pages 60 and 61.

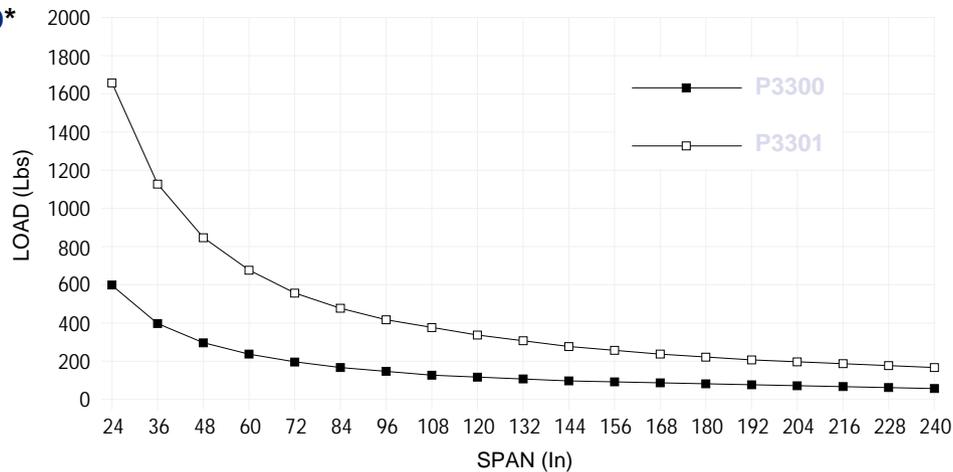
Weight: 135 Lbs/C Ft (201 kg/100 m)

## P3301



Weight: 270 Lbs/C Ft (402 kg/100 m)

## BEAM LOAD\*



\* Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P3300	1.35	2.0	1,810	200	.105	2.7	■	■	■	■	■	■	■	
P3301	2.70	4.0	5,080	570	.105	2.7	■	■	■	■	■	■	■	

Nominal thickness of 12 gage strip steel is .105 inches.

# P3300 & P3301 CHANNELS

FOR 1 $\frac{5}{8}$ " (41 MM) WIDTH SERIES CHANNEL



## BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P3300	600	2.7	0.10	3	600	2.7	600	2.7	400	1.8
		P3301	1660*	7.4	0.06	1	1660*	7.4	1660*	7.4	1660*	7.4
36	914	P3300	400	1.8	0.22	6	360	1.6	270	1.2	180	0.8
		P3301	1130	5.0	0.13	3	1130	5.0	1130	5.0	860	3.8
48	1219	P3300	300	1.3	0.40	10	200	0.9	150	0.7	100	0.4
		P3301	850	3.8	0.23	6	850	3.8	730	3.2	480	2.1
60	1524	P3300	240	1.1	0.62	16	130	0.6	100	0.4	60	0.3
		P3301	680	3.0	0.37	9	620	2.8	460	2.0	310	1.4
72	1829	P3300	200	0.9	0.89	23	90	0.4	70	0.3	40	0.2
		P3301	560	2.5	0.52	13	430	1.9	320	1.4	210	0.9
84	2134	P3300	170	0.8	1.20	31	70	0.3	50	0.2	30	0.1
		P3301	480	2.1	0.71	18	320	1.4	240	1.1	160	0.7
96	2438	P3300	150	0.7	1.58	40	50	0.2	40	0.2	30	0.1
		P3301	420	1.9	0.93	24	240	1.1	180	0.8	120	0.5
108	2743	P3300	130	0.6	1.95	50	40	0.2	30	0.1	20	0.1
		P3301	380	1.7	1.19	30	190	0.8	140	0.6	100	0.4
120	3048	P3300	120	0.5	2.47	63	30	0.1	20	0.1	20	0.1
		P3301	340	1.5	1.47	37	150	0.7	120	0.5	80	0.4

\*Load limited by spot weld shear.

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

# P3300 & P3301 CHANNELS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P3300	2110	9.4	7100	31.6	7030	31.3	6770	30.1	5920	26.3
		P3301	4110	18.3	16740	74.5	16390	72.9	15800	70.3	15080	67.1
36	914	P3300	1790	8.0	6250	27.8	5920	26.3	4360	19.4	3030	13.5
		P3301	3820	17.0	15880	70.6	15080	67.1	13760	61.2	12150	54.0
48	1219	P3300	1400	6.2	5440	24.2	3830	17.0	2450	10.9	1700	7.6
		P3301	3470	15.4	14680	65.3	13260	59.0	10900	48.5	8080	35.9
60	1524	P3300	1080	4.8	3720	16.5	2450	10.9	1570	7.0	**	**
		P3301	3070	13.7	13120	58.4	10900	48.5	7450	33.1	5170	23.0
72	1829	P3300	860	3.8	2580	11.5	1700	7.6	**	**	**	**
		P3301	2640	11.7	11230	50.0	8080	35.9	5170	23.0	3590	16.0
84	2134	P3300	**	**	1900	8.5	**	**	**	**	**	**
		P3301	2250	10.0	8990	40.0	5940	26.4	3800	16.9	**	**
96	2438	P3300	**	**	**	**	**	**	**	**	**	**
		P3301	1930	8.6	6890	30.6	4550	20.2	**	**	**	**
108	2743	P3300	**	**	**	**	**	**	**	**	**	**
		P3301	1670	7.4	5440	24.2	3590	16.0	**	**	**	**
120	3048	P3300	**	**	**	**	**	**	**	**	**	**
		P3301	**	**	4410	19.6	**	**	**	**	**	**

\*\* $\frac{KL}{r} > 200$

## ELEMENTS OF SECTION

Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In <sup>2</sup>	cm <sup>2</sup>	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm
P3300	.398	2.6	.037	1.5	.072	1.2	.306	.78	.145	6.0	.178	2.9	.603	1.5
P3301	.797	5.1	.177	7.4	.202	3.3	.471	1.2	.289	12.0	.356	5.8	.603	1.5

I - Moment of Inertia

S - Section Modulus

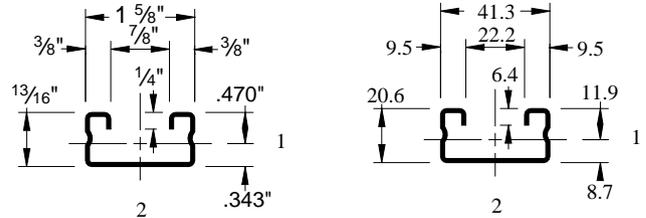
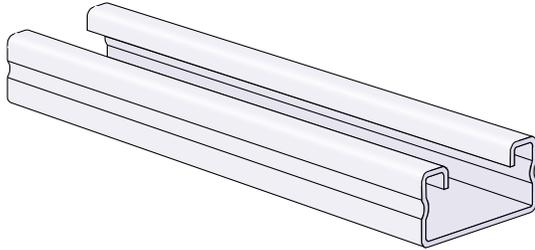
r - Radius of Gyration

# P4000™ & P4001 CHANNELS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



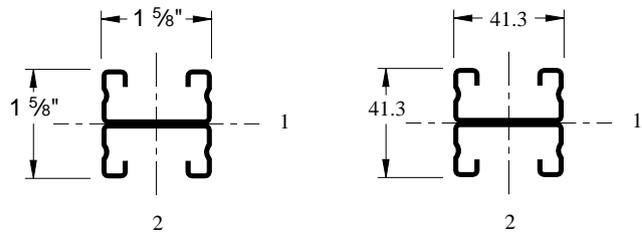
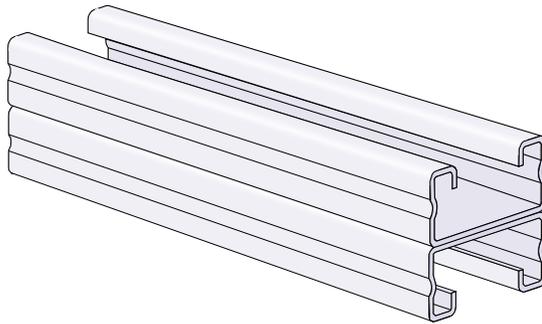
## P4000



Pierced channels are found on pages 60 and 61.

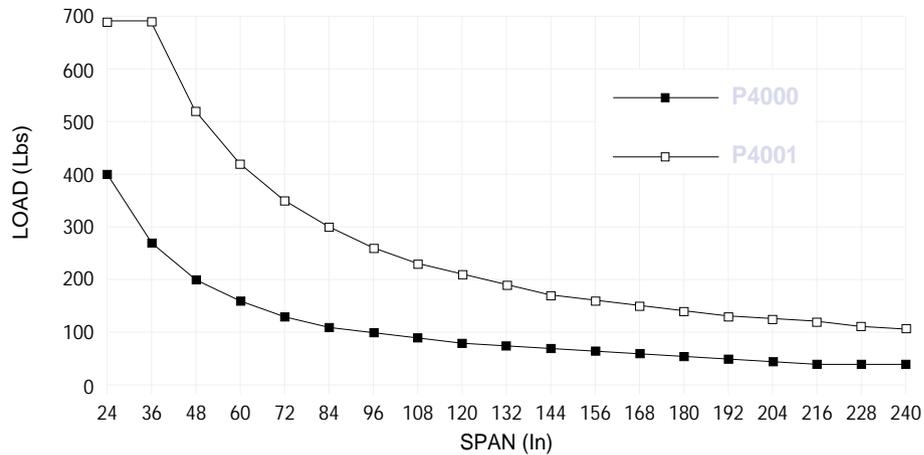
Weight: 82 Lbs/C Ft (122 kg/100 m)

## P4001



Weight: 164 Lbs/C Ft (244 kg/100 m)

## BEAM LOAD\*



\*Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N*m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
<b>P4000</b>	0.82	1.2	1,210	140	.060	1.5	■	■	■	■	■	■	■	■
<b>P4001</b>	1.64	2.4	3,140	350	.060	1.5	■	■	■	■	■	■	■	■

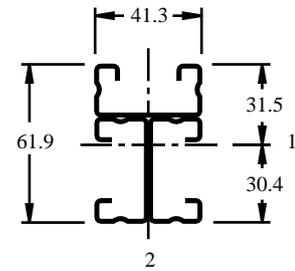
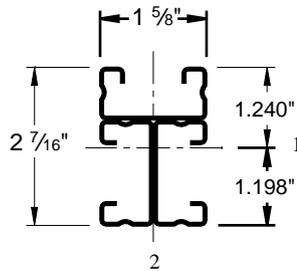
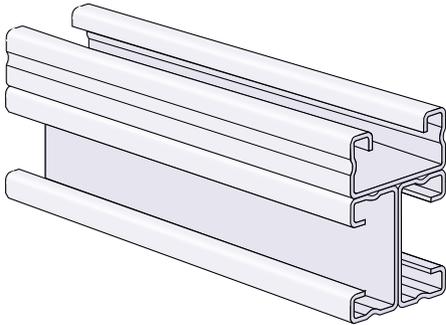
Nominal thickness of 16 gage strip steel is .060 inches.

# P4000 CHANNEL COMBINATIONS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

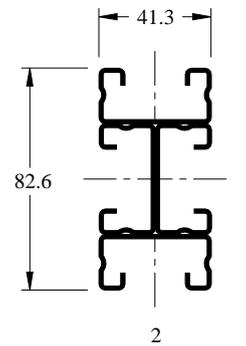
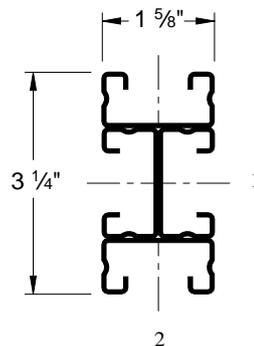
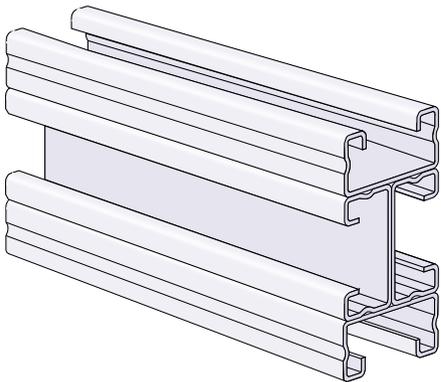


## P4003



Weight: 246 Lbs/C Ft (366 kg/100 m)

## P4004



Weight: 328 Lbs/C Ft (488 kg/100 m)

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P4003	2.46	3.7	8,450	950	.060	1.5	■	■	■	■	■	■		
P4004	3.28	4.9	13,380	1,510	.060	1.5	■	■	■	■	■	■		

# P4000 & P4001 CHANNELS

FOR 1 $\frac{5}{8}$ " (41 MM) WIDTH SERIES CHANNEL



## BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P4000	400	1.8	0.11	3	400	1.8	380	1.7	250	1.1
		P4001	690*	3.1	0.04	1	690*	3.1	690*	3.1	690*	3.1
36	914	P4000	270	1.2	0.24	6	220	1.0	170	0.8	110	0.5
		P4001	690*	3.1	0.14	4	690*	3.1	690*	3.1	490	2.2
48	1219	P4000	200	0.9	0.42	11	130	0.6	90	0.4	60	0.3
		P4001	520	2.3	0.25	6	520	2.3	410	1.8	280	1.2
60	1524	P4000	160	0.7	0.66	17	80	0.4	60	0.3	40	0.2
		P4001	420	1.9	0.40	10	350	1.6	260	1.2	180	0.8
72	1829	P4000	130	0.6	0.93	24	60	0.3	40	0.2	30	0.1
		P4001	350	1.6	0.57	15	250	1.1	180	0.8	120	0.5
84	2134	P4000	110	0.5	1.25	32	40	0.2	30	0.1	20	0.1
		P4001	300	1.3	0.78	20	180	0.8	140	0.6	90	0.4
96	2438	P4000	100	0.4	1.70	43	30	0.1	20	0.1	20	0.1
		P4001	260	1.2	1.01	26	140	0.6	100	0.4	70	0.3
108	2743	P4000	90	0.4	2.18	55	20	0.1	20	0.1	10	0.0
		P4001	230	1.0	1.27	32	110	0.5	80	0.4	50	0.2
120	3048	P4000	80	0.4	2.65	67	20	0.1	20	0.1	NR	NR
		P4001	210	0.9	1.59	40	90	0.4	70	0.3	40	0.2

\*Load limited by spot weld shear.

NR = Not Recommended

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

# P4000 & P4001 CHANNELS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P4000	1380	6.1	3720	16.5	3680	16.4	3610	16.1	3520	15.7
		P4001	2650	11.8	10020	44.6	9800	43.6	9430	41.9	8980	39.9
36	914	P4000	990	4.4	2010	8.9	1960	8.7	1880	8.4	1780	7.9
		P4001	2440	10.9	9480	42.2	8980	39.9	8150	36.3	7130	31.7
48	1219	P4000	690	3.1	1130	5.0	1100	4.9	1060	4.7	1000	4.4
		P4001	2200	9.8	8720	38.8	7830	34.8	6350	28.2	4620	20.6
60	1524	P4000	500	2.2	720	3.2	710	3.2	680	3.0	**	**
		P4001	1920	8.5	7750	34.5	6350	28.2	4260	18.9	2960	13.2
72	1829	P4000	380	1.7	500	2.2	490	2.2	**	**	**	**
		P4001	1630	7.3	6550	29.1	4620	20.6	2960	13.2	2050	9.1
84	2134	P4000	**	**	370	1.7	**	**	**	**	**	**
		P4001	1370	6.1	5140	22.9	3400	15.1	2170	9.7	**	**
96	2438	P4000	**	**	**	**	**	**	**	**	**	**
		P4001	1170	5.2	3940	17.5	2600	11.6	**	**	**	**
108	2743	P4000	**	**	**	**	**	**	**	**	**	**
		P4001	1010	4.5	3110	13.8	2050	9.1	**	**	**	**
120	3048	P4000	**	**	**	**	**	**	**	**	**	**
		P4001	**	**	2520	11.2	**	**	**	**	**	**

\*\* $\frac{KL}{r} > 200$

## ELEMENTS OF SECTION

Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In <sup>2</sup>	cm <sup>2</sup>	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm
P4000	.239	1.50	.023	0.96	.048	0.79	.308	0.78	.091	3.80	.112	1.80	.617	1.60
P4001	.478	3.10	.101	4.20	.125	2.00	.460	1.20	.182	7.60	.224	3.70	.617	1.60

I - Moment of Inertia

S - Section Modulus

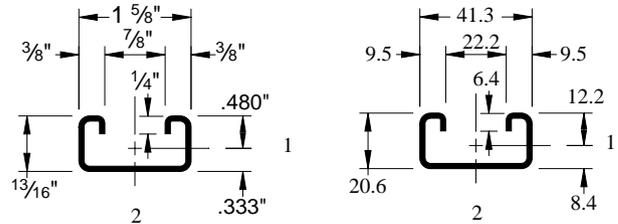
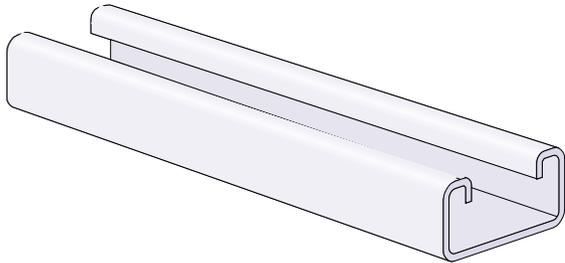
r - Radius of Gyration

# P4100™ & P4101 CHANNELS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



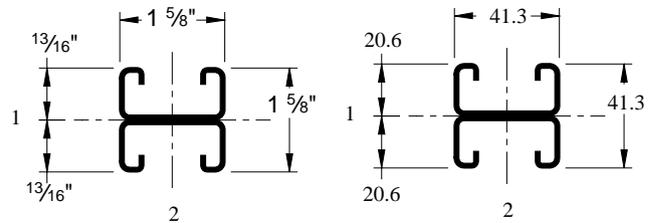
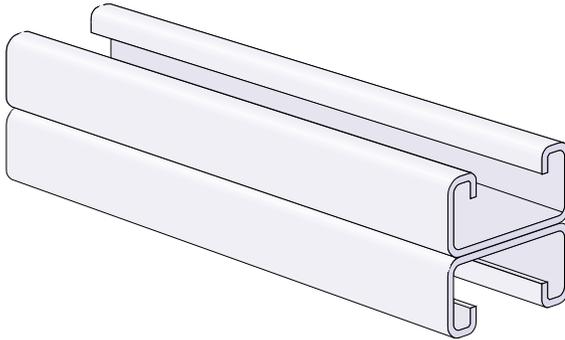
## P4100



Pierced channels are found on pages 60 and 61.

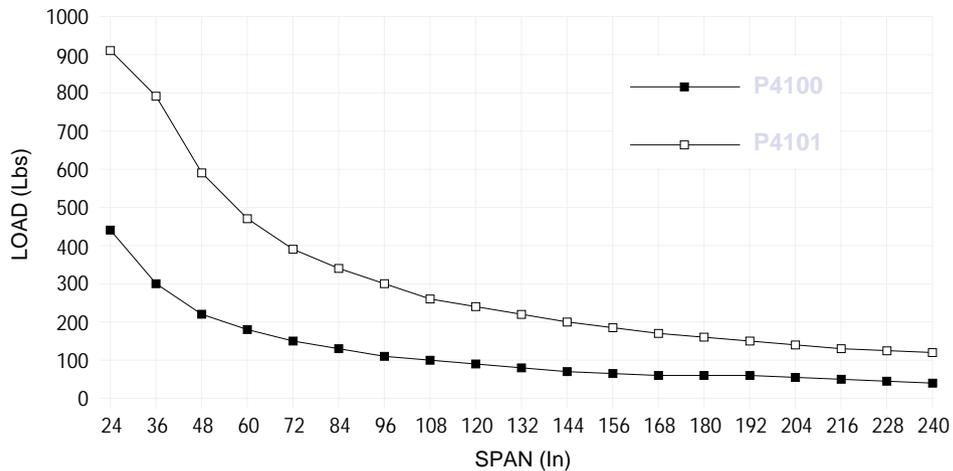
Weight: 97 Lbs/C Ft (144 kg/100 m)

## P4101



Weight: 194 Lbs/C Ft (289 kg/100 m)

## BEAM LOAD\*



\*Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N*m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
<b>P4100</b>	.97	1.4	1,330	150	.075	1.9	■	■	■	■	■	■		
<b>P4101</b>	1.94	2.9	3,550	400	.075	1.9	■	■	■	■	■	■		

Nominal thickness of 14 gage strip steel is .075 inches.

# P4100 & P4101 CHANNELS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P4100	440	2.0	0.11	3	440	2.0	410	1.8	270	1.2
		P4101	910*	4.0	0.05	1	910*	4.0	910*	4.0	910*	4.0
36	914	P4100	300	1.3	0.25	6	240	1.1	180	0.8	120	0.5
		P4101	790	3.5	0.14	4	790	3.5	790	3.5	550	2.4
48	1219	P4100	220	1.0	0.43	11	140	0.6	100	0.4	70	0.3
		P4101	590	2.6	0.25	6	590	2.6	470	2.1	310	1.4
60	1524	P4100	180	0.8	0.69	17	90	0.4	70	0.3	40	0.2
		P4101	470	2.1	0.39	10	400	1.8	300	1.3	200	0.9
72	1829	P4100	150	0.7	0.99	25	60	0.3	50	0.2	30	0.1
		P4101	390	1.7	0.56	14	280	1.2	210	0.9	140	0.6
84	2134	P4100	130	0.6	1.36	35	40	0.2	30	0.1	20	0.1
		P4101	340	1.5	0.78	20	200	0.9	150	0.7	100	0.4
96	2438	P4100	110	0.5	1.72	44	30	0.1	30	0.1	20	0.1
		P4101	300	1.3	1.03	26	160	0.7	120	0.5	80	0.4
108	2743	P4100	100	0.4	2.22	56	30	0.1	20	0.1	10	0.0
		P4101	260	1.2	1.27	32	120	0.5	90	0.4	60	0.3
120	3048	P4100	90	0.4	2.75	70	20	0.1	20	0.1	NR	NR
		P4101	240	1.1	1.61	41	100	0.4	70	0.3	50	0.2

\*Load limited by spot weld shear.

NR = Not Recommended

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

# P4100 & P4101 CHANNELS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P4100	1620	7.2	5320	23.7	5270	23.4	4810	21.4	4160	18.5
		P4101	3030	13.5	12000	53.4	11720	52.1	11250	50.0	10680	47.5
36	914	P4100	1340	6.0	4870	21.7	4160	18.5	2980	13.3	2070	9.2
		P4101	2790	12.4	11320	50.4	10680	47.5	9620	42.8	8330	37.1
48	1219	P4100	1020	4.5	3800	16.9	2620	11.7	1680	7.5	1160	5.2
		P4101	2500	11.1	10350	46.0	9210	41.0	7330	32.6	5240	23.3
60	1524	P4100	780	3.5	2540	11.3	1680	7.5	**	**	**	**
		P4101	2180	9.7	9110	40.5	7330	32.6	4830	21.5	3350	14.9
72	1829	P4100	610	2.7	1760	7.8	1160	5.2	**	**	**	**
		P4101	1840	8.2	7590	33.8	5240	23.3	3350	14.9	2330	10.4
84	2134	P4100	**	**	1300	5.8	**	**	**	**	**	**
		P4101	1550	6.9	5830	25.9	3850	17.1	2460	10.9	**	**
96	2438	P4100	**	**	**	**	**	**	**	**	**	**
		P4101	1320	5.9	4470	19.9	2950	13.1	**	**	**	**
108	2743	P4100	**	**	**	**	**	**	**	**	**	**
		P4101	1140	5.1	3530	15.7	2330	10.4	**	**	**	**
120	3048	P4100	**	**	**	**	**	**	**	**	**	**
		P4101	**	**	2860	12.7	**	**	**	**	**	**

\*\* $\frac{KL}{r} > 200$

## ELEMENTS OF SECTION

Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In <sup>2</sup>	cm <sup>2</sup>	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm
P4100	.287	1.9	.025	1.0	.053	.87	.298	.76	.106	4.4	.131	2.1	.609	1.5
P4101	.574	3.7	.114	4.7	.141	2.3	.447	1.1	.212	8.8	.261	4.3	.609	1.5

I - Moment of Inertia

S - Section Modulus

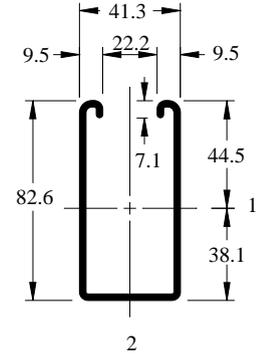
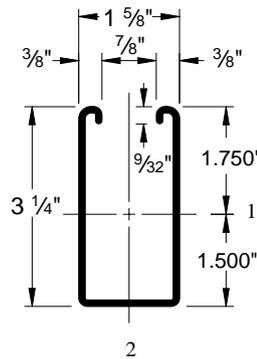
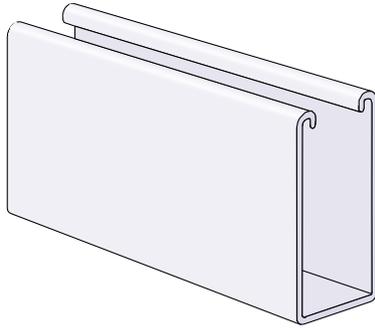
r - Radius of Gyration

# P5000™ & P5001 CHANNELS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



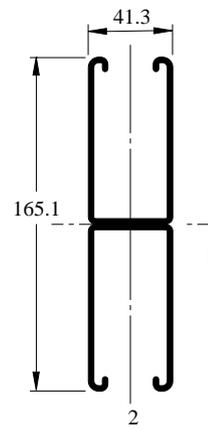
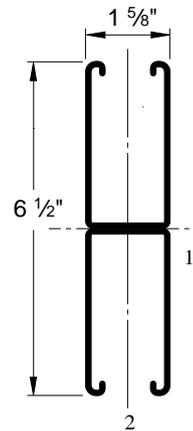
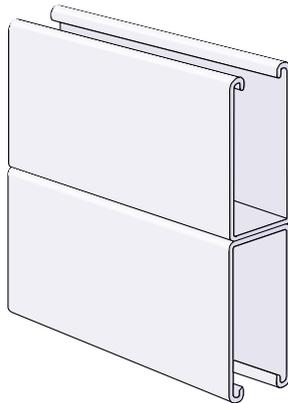
## P5000



Pierced channels are found on pages 60 and 61.

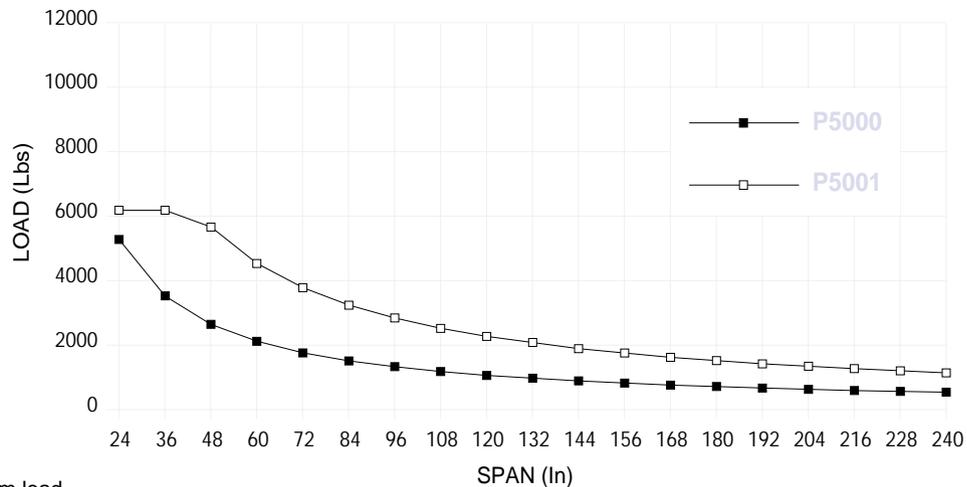
Weight: 305 Lbs/C Ft (454 kg/100 m)

## P5001



Weight: 610 Lbs/C Ft (908 kg/100 m)

## BEAM LOAD\*



\*Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N*m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P5000	3.05	4.5	15,790	1,780	.105	2.7	■	■	■	■	■	■		
P5001	6.10	9.1	33,910	3,830	.105	2.7	■	■	■	■	■	■		

Nominal thickness of 12 gage strip steel is .105 inches.

# P5000 & P5001 CHANNELS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P5000	5260†	23.4	0.03	1	5260	23.4	5260	23.4	5260	23.4
		P5001	6170*†	27.4	0.01	0	6170*†	27.4	6170*†	27.4	6170*†	27.4
36	914	P5000	3510	15.6	0.07	2	3510	15.6	3510	15.6	3510	15.6
		P5001	6170*†	27.4	0.02	1	6170*†	27.4	6170*†	27.4	6170*†	27.4
48	1219	P5000	2630	11.7	0.12	3	2630	11.7	2630	11.7	2630	11.7
		P5001	5650†	25.1	0.05	1	5650†	25.1	5650†	25.1	5650†	25.1
60	1524	P5000	2110	9.4	0.18	5	2110	9.4	2110	9.4	1920	8.5
		P5001	4520†	20.1	0.08	2	4520†	20.1	4520†	20.1	4520†	20.1
72	1829	P5000	1750	7.8	0.26	7	1750	7.8	1750	7.8	1330	5.9
		P5001	3770	16.8	0.11	3	3770	16.8	3770	16.8	3770	16.8
84	2134	P5000	1500	6.7	0.36	9	1500	6.7	1470	6.5	980	4.4
		P5001	3230	14.4	0.15	4	3230	14.4	3230	14.4	3230	14.4
96	2438	P5000	1320	5.9	0.47	12	1320	5.9	1130	5.0	750	3.3
		P5001	2830	12.6	0.20	5	2830	12.6	2830	12.6	2830	12.6
108	2743	P5000	1170	5.2	0.59	15	1170	5.2	890	4.0	590	2.6
		P5001	2510	11.2	0.25	6	2510	11.2	2510	11.2	2510	11.2
120	3048	P5000	1050	4.7	0.73	19	960	4.3	720	3.2	480	2.1
		P5001	2260	10.1	0.31	8	2260	10.1	2260	10.1	2260	10.1
144	3658	P5000	880	3.9	1.06	27	670	3.0	500	2.2	330	1.5
		P5001	1880	8.4	0.44	11	1880	8.4	1880	8.4	1690	7.5
168	4267	P5000	750	3.3	1.43	36	490	2.2	370	1.6	250	1.1
		P5001	1610	7.2	0.60	15	1610	7.2	1610	7.2	1240	5.5
192	4877	P5000	660	2.9	1.88	48	380	1.7	280	1.2	190	0.8
		P5001	1410	6.3	0.79	20	1410	6.3	1410	6.3	950	4.2
216	5486	P5000	580	2.6	2.35	60	300	1.3	220	1.0	150	0.7
		P5001	1260	5.6	1.00	26	1260	5.6	1130	5.0	750	3.3
240	6096	P5000	530	2.4	2.94	75	240	1.1	180	0.8	120	0.5
		P5001	1130	5.0	1.24	31	1130	5.0	910	4.0	610	2.7

\*Load limited by spot weld shear. †Bearing load may govern capacity. See page 67.

Notes:

- Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
- Long span beams should be supported in such a manner as to prevent rotation and twist.
- Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
- See page 66 for lateral bracing load reduction charts.

# P5000 & P5001 CHANNELS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P5000	5120	22.8	12130	54.0	12030	53.5	11870	52.8	11660	51.9
		P5001	7730	34.4	30390	135.2	30170	134.2	29790	132.5	29330	130.5
36	914	P5000	4310	19.2	8650	38.5	8430	37.5	8050	35.8	7590	33.8
		P5001	7650	34.0	29840	132.7	29330	130.5	28490	126.7	27460	122.1
48	1219	P5000	3310	14.7	5520	24.6	5320	23.7	5020	22.3	4690	20.9
		P5001	7540	33.5	29070	129.3	28170	125.3	26670	118.6	24830	110.4
60	1524	P5000	2660	11.8	4000	17.8	3840	17.1	3590	16.0	3330	14.8
		P5001	7390	32.9	28080	124.9	26670	118.6	24320	108.2	21460	95.5
72	1829	P5000	2240	10.0	3160	14.1	3020	13.4	2800	12.5	2570	11.4
		P5001	7200	32.0	26870	119.5	24830	110.4	21460	95.5	17330	77.1
84	2134	P5000	1940	8.6	2650	11.8	2510	11.2	2310	10.3	2100	9.3
		P5001	6960	31.0	25440	113.2	22670	100.8	18070	80.4	12930	57.5
96	2438	P5000	1730	7.7	2310	10.3	2170	9.7	1980	8.8	1780	7.9
		P5001	6660	29.6	23790	105.8	20170	89.7	14260	63.4	9900	44.0
108	2743	P5000	1570	7.0	2070	9.2	1930	8.6	1730	7.7	1540	6.9
		P5001	6280	27.9	21920	97.5	17330	77.1	11270	50.1	7820	34.8
120	3048	P5000	1440	6.4	1880	8.4	1740	7.7	1550	6.9	**	**
		P5001	5800	25.8	19830	88.2	14260	63.4	9130	40.6	**	**

\*\* $\frac{KL}{r} > 200$

## ELEMENTS OF SECTION

Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In <sup>2</sup>	cm <sup>2</sup>	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm
P5000	.897	5.8	1.099	45.7	.628	10.3	1.107	2.8	.359*	14.9	.442*	7.2	.695	1.8
P5001	1.794	11.6	5.578*	232.2	1.716*	28.1	1.864	4.7	.719*	29.9	.884*	14.5	.695	1.8

I - Moment of Inertia      S - Section Modulus      r - Radius of Gyration

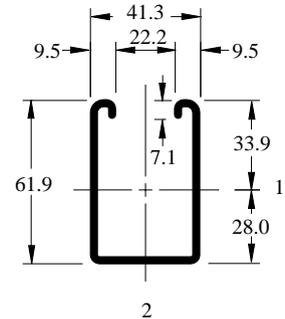
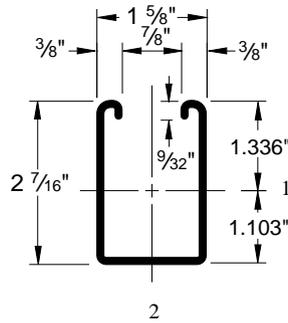
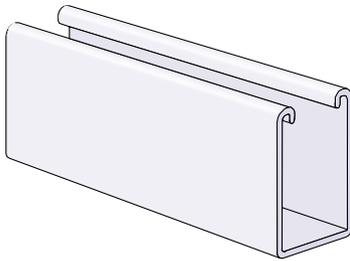
\* These are effective section properties.

# P5500™ & P5501 CHANNELS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



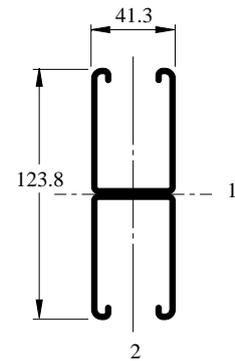
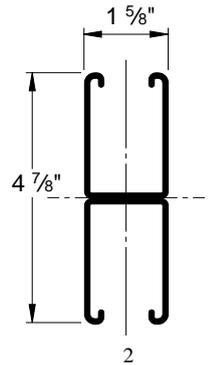
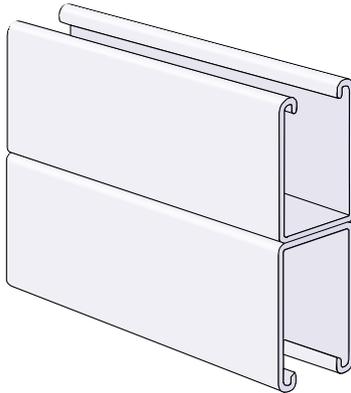
## P5500



Weight: 247 Lbs/C Ft (368 kg/100 m)

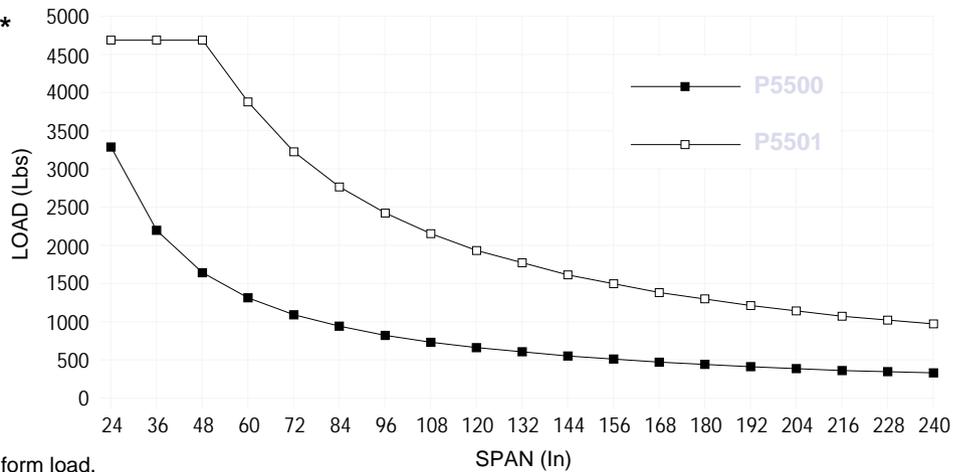
Pierced channels are found on pages 60 and 61.

## P5501



Weight: 494 Lbs/C Ft (735 kg/100 m)

## BEAM LOAD\*



\*Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P5500	2.47	3.7	9,830	1110	.105	2.7	■	■	■	■	■	■		■
P5501	4.94	7.4	29,000	3280	.105	2.7	■	■	■	■	■	■		

Nominal thickness of 12 gage strip steel is .105 inches.

# P5500 & P5501 CHANNELS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P5500	3280	14.6	0.04	1	3280	14.6	3280	14.6	3280	14.6
		P5501	4680*	20.8	0.01	0	4680*	20.8	4680*	20.8	4680*	20.8
36	914	P5500	2190	9.7	0.09	2	2190	9.7	2190	9.7	2190	9.7
		P5501	4680*	20.8	0.03	1	4680*	20.8	4680*	20.8	4680*	20.8
48	1219	P5500	1640	7.3	0.15	4	1640	7.3	1640	7.3	1430	6.4
		P5501	4680*	20.8	0.08	2	4680*	20.8	4680*	20.8	4680*	20.8
60	1524	P5500	1310	5.8	0.24	6	1310	5.8	1310	5.8	910	4.0
		P5501	3870	17.2	0.13	3	3870	17.2	3870	17.2	3870	17.2
72	1829	P5500	1090	4.8	0.34	9	1090	4.8	950	4.2	630	2.8
		P5501	3220	14.3	0.19	5	3220	14.3	3220	14.3	3220	14.3
84	2134	P5500	940	4.2	0.47	12	930	4.1	700	3.1	470	2.1
		P5501	2760	12.3	0.26	7	2760	12.3	2760	12.3	2510	11.2
96	2438	P5500	820	3.6	0.61	16	710	3.2	540	2.4	360	1.6
		P5501	2420	10.8	0.34	9	2420	10.8	2420	10.8	1920	8.5
108	2743	P5500	730	3.2	0.78	20	560	2.5	420	1.9	280	1.2
		P5501	2150	9.6	0.43	11	2150	9.6	2150	9.6	1520	6.8
120	3048	P5500	660	2.9	0.96	24	460	2.0	340	1.5	230	1.0
		P5501	1930	8.6	0.52	13	1930	8.6	1840	8.2	1230	5.5
144	3658	P5500	550	2.4	1.39	35	320	1.4	240	1.1	160	0.7
		P5501	1610	7.2	0.75	19	1610	7.2	1280	5.7	850	3.8
168	4267	P5500	470	2.1	1.88	48	230	1.0	170	0.8	120	0.5
		P5501	1380	6.1	1.03	26	1250	5.6	940	4.2	630	2.8
192	4877	P5500	410	1.8	2.45	62	180	0.8	130	0.6	90	0.4
		P5501	1210	5.4	1.34	34	960	4.3	720	3.2	480	2.1
216	5486	P5500	360	1.6	3.06	78	140	0.6	110	0.5	70	0.3
		P5501	1070	4.8	1.69	43	760	3.4	570	2.5	380	1.7
240	6096	P5500	330	1.5	3.85	98	110	0.5	90	0.4	60	0.3
		P5501	970	4.3	2.11	53	610	2.7	460	2.0	310	1.4

\*Load limited by spot weld shear.

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

# P5500 & P5501 CHANNELS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P5500	4490	20.0	12060	53.6	11930	53.1	11710	52.1	11430	50.8
		P5501	8540	38.0	31180	138.7	30870	137.3	30350	135.0	29720	132.2
36	914	P5500	3810	16.9	8560	38.1	8260	36.7	7760	34.5	7200	32.0
		P5501	8390	37.3	30420	135.3	29720	132.2	28560	127.0	27140	120.7
48	1219	P5500	3080	13.7	5810	25.8	5540	24.6	5130	22.8	4700	20.9
		P5501	8190	36.4	29360	130.6	28120	125.1	26060	115.9	23540	104.7
60	1524	P5500	2610	11.6	4480	19.9	4230	18.8	3860	17.2	3480	15.5
		P5501	7920	35.2	28000	124.6	26060	115.9	22830	101.6	18900	84.1
72	1829	P5500	2290	10.2	3730	16.6	3480	15.5	3120	13.9	2760	12.3
		P5501	7590	33.8	26340	117.2	23540	104.7	18900	84.1	13610	60.5
84	2134	P5500	2050	9.1	3250	14.5	2990	13.3	2630	11.7	2290	10.2
		P5501	7160	31.8	24370	108.4	20560	91.5	14400	64.1	10000	44.5
96	2438	P5500	1860	8.3	2910	12.9	2640	11.7	2270	10.1	1940	8.6
		P5501	6620	29.4	22100	98.3	17120	76.2	11020	49.0	7650	34.0
108	2743	P5500	1710	7.6	2640	11.7	2360	10.5	2000	8.9	1680	7.5
		P5501	5970	26.6	19530	86.9	13610	60.5	8710	38.7	6050	26.9
120	3048	P5500	1580	7.0	2430	10.8	2140	9.5	1770	7.9	**	**
		P5501	5380	23.9	16660	74.1	11020	49.0	7050	31.4	**	**

\*\* $\frac{KL}{r} > 200$

## ELEMENTS OF SECTION

Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In <sup>2</sup>	cm <sup>2</sup>	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm
P5500	.726	4.7	.523	21.8	.391	6.4	.848	2.2	.335	13.9	.412	6.8	.679	1.7
P5501	1.453	9.4	2.811	117.0	1.153	18.9	1.391	3.5	.669	27.8	.824	13.5	.679	1.7

I - Moment of Inertia

S - Section Modulus

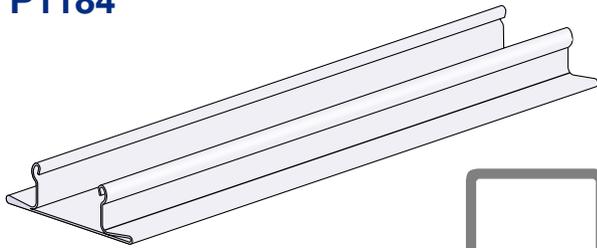
r - Radius of Gyration

# CLOSURE STRIPS

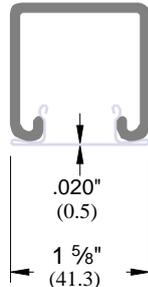
FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P1184



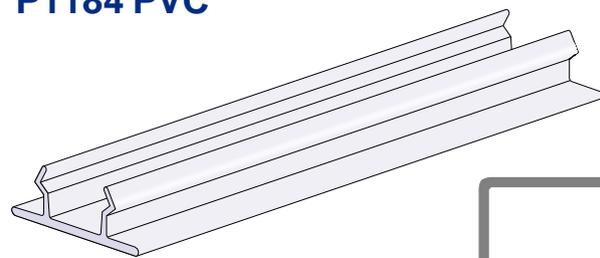
Standard Length: 10'.



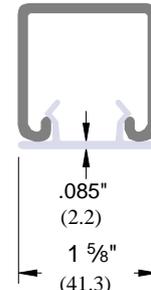
Finish: Zinc bonderized, plain.

Weight: 27 Lbs/C Ft (40.2 kg/100 m)

## P1184 PVC



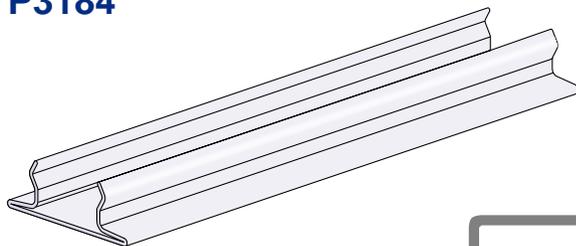
Standard Length: 10'.



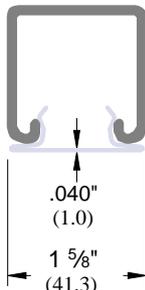
Material: Paintable PVC.  
Color: Green, Grey.

Weight: 11 Lbs/C Ft (16.5 kg/100 m)

## P3184



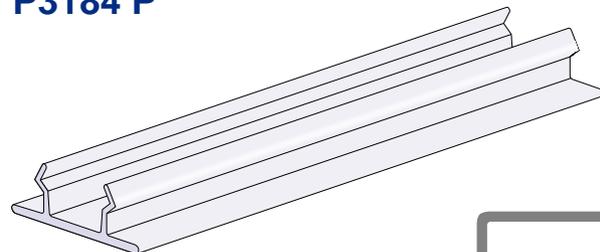
Standard Length: 10'.



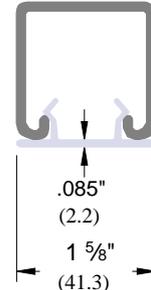
Finish: Green, pre-galvanized, plain.

Weight: 47 Lbs/C Ft (69.9 kg/100 m)

## P3184 P



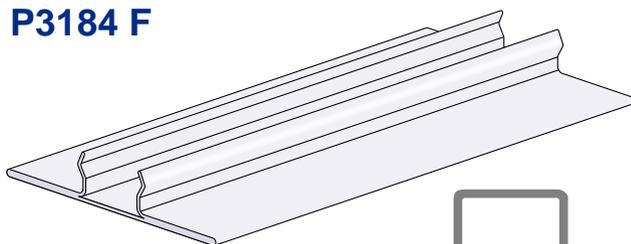
Standard Length: 10'.



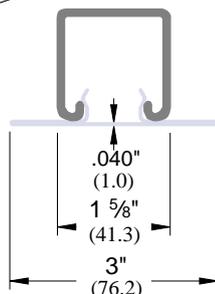
Material : G.E. Noryl® Plastic.  
Color: Green, Grey.

Weight: 9.4 Lbs/C Ft (14.0 kg/100 m)

## P3184 F



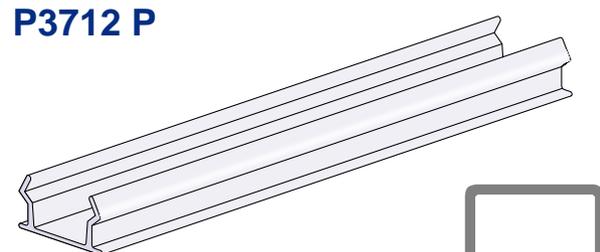
Standard Length: 16'.



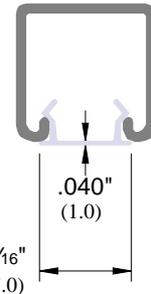
Finish: Green, pre-galvanized, plain.

Weight: 90 Lbs/C Ft (134 kg/100 m)

## P3712 P



Standard Length: 10'.



Material: Plastic.  
Color: Black.  
Note: Use with P3170, P3270, and P3370 series concrete insert.

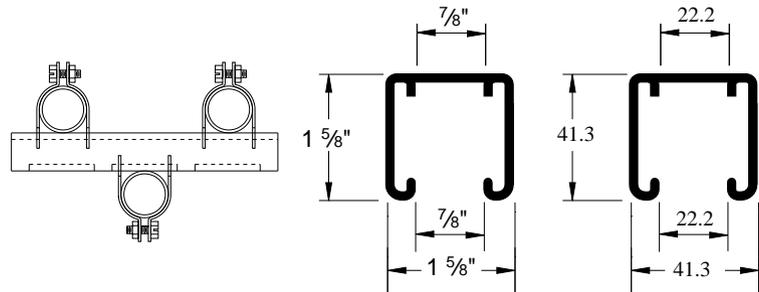
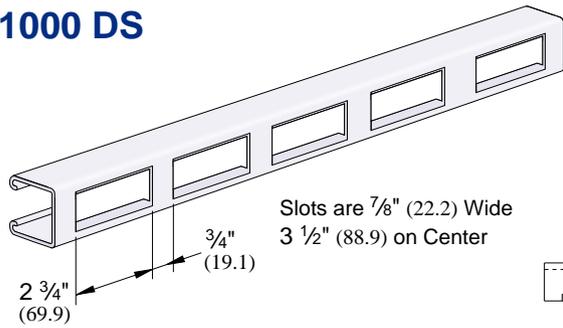
Weight: 5.4 Lbs/C Ft (8.0 kg/100 m)

# PIERCED CHANNELS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P1000 DS

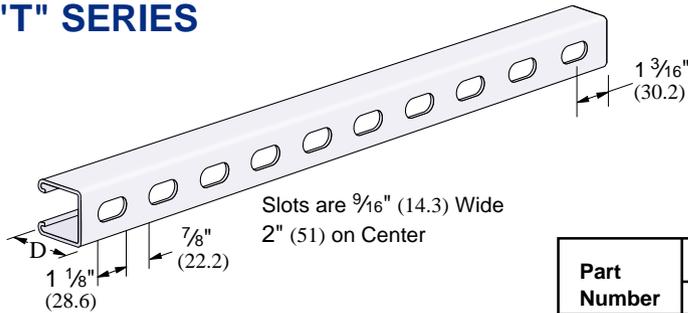


Standard Lengths: 10' and 20'.

Note: For beam load capacity, use 70% of P1000 load chart.

Weight: 173 Lbs/C Ft (257 kg/100m)

## "T" SERIES

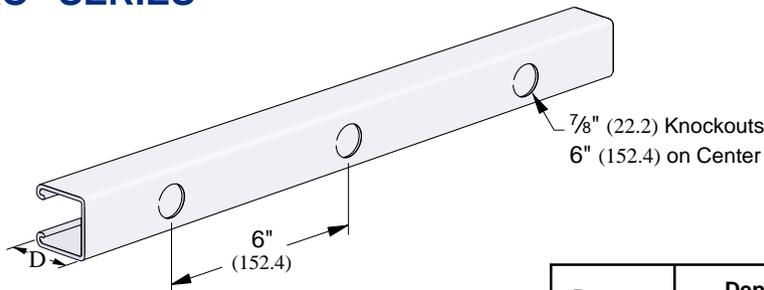


Part Number	Depth "D"		Material Thickness		Weight	
	In	mm	In	mm	Lbs/C Ft	kg/100m
P1000 T	1 5/8	41	.105	2.7	185	275
P1100 T	1 5/8	41	.075	1.6	136	202
P2000 T	1 5/8	41	.060	1.5	113	168
P3000 T	1 3/8	35	.105	2.7	165	245
P3300 T	7/8	22	.105	2.7	130	193
P4000 T	1 3/16	21	.060	1.5	79	118
P4100 T	1 3/16	21	.075	1.6	87	129
P5000 T	3/4	82	.105	2.7	300	446
P5500 T	2 7/16	62	.105	2.7	242	360

Standard Lengths: 10' and 20'.

Note: For beam load capacity, use 85% of appropriate load chart.

## "KO" SERIES



Part Number	Depth "D"		Material Thickness		Weight	
	In	mm	In	mm	Lbs/C Ft	kg/100m
P1000 KO	1 5/8	41	.105	2.7	190	283
P1100 KO	1 5/8	41	.075	1.9	140	208
P2000 KO	1 5/8	41	.060	1.5	117	174
P3000 KO	1 3/8	35	.105	2.7	170	253
P5000 KO	3/4	82	.105	2.7	305	454
P5500 KO	2 7/16	62	.105	2.7	247	368

Standard Lengths: 10' and 20'.

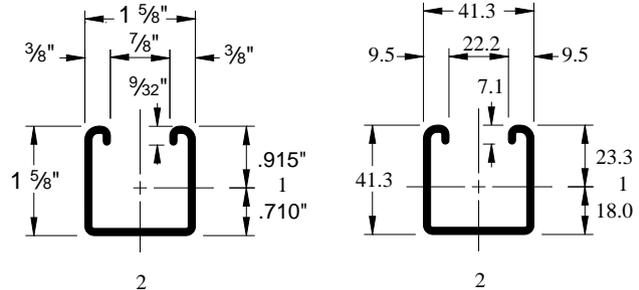
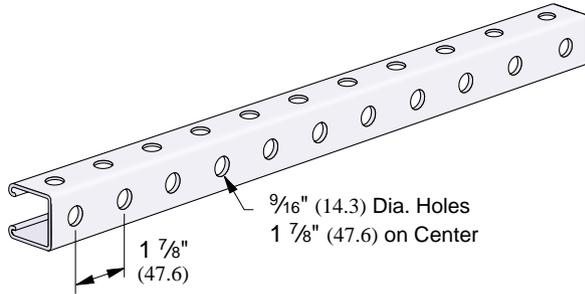
Note: For beam load capacity, use 95% of appropriate load chart.

# PIERCED CHANNELS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P1000 H3

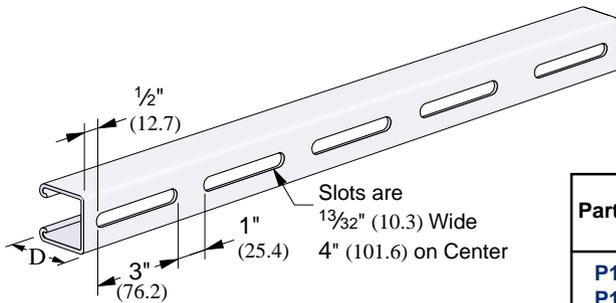


Standard Lengths: 10' and 20'.

Note: For beam load capacity, use 90% of P1000 load chart. For column load capacity, use 68% of P1000 load chart.

Weight: 175 Lbs/C Ft (260 kg/100 m)

## "SL" SERIES

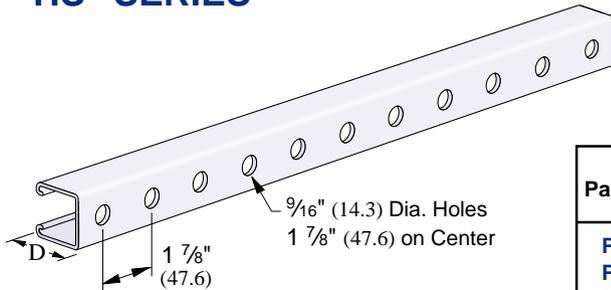


Part Number	Depth "D"		Material Thickness		Weight	
	In	mm	In	mm	Lbs/C Ft	kg/100 m
P1000 SL	1 5/8	41	.105	2.7	185	275
P1100 SL	1 5/8	41	.075	1.9	136	202
P2000 SL	1 5/8	41	.060	1.5	113	168
P3000 SL	1 3/8	35	.105	2.7	165	246
P3300 SL	7/8	22	.105	2.7	130	193
P4000 SL	13/16	21	.060	1.5	79	118
P4100 SL	13/16	21	.075	1.9	87	129
P5000 SL	3/4	82	.105	2.7	300	446
P5500 SL	27/16	62	.105	2.7	242	360

Standard Lengths: 10' and 20'.

Note: For beam load capacity, use 85% of appropriate load chart.

## "HS" SERIES



Part Number	Depth "D"		Material Thickness		Weight	
	In	mm	In	mm	Lbs/C Ft	kg/100 m
P1000 HS	1 5/8	41	.105	2.7	185	275
P1100 HS	1 5/8	41	.075	1.9	136	202
P2000 HS	1 5/8	41	.060	1.5	113	168
P3000 HS	1-3/8	35	.105	2.7	165	246
P3300 HS	7/8	22	.105	2.7	130	193
P4000 HS	13/16	21	.060	1.5	79	118
P4100 HS	13/16	21	.075	1.9	87	129
P5000 HS	3/4	82	.105	2.7	300	446
P5500 HS	27/16	62	.105	2.7	242	360

Standard Lengths: 10' and 20'.

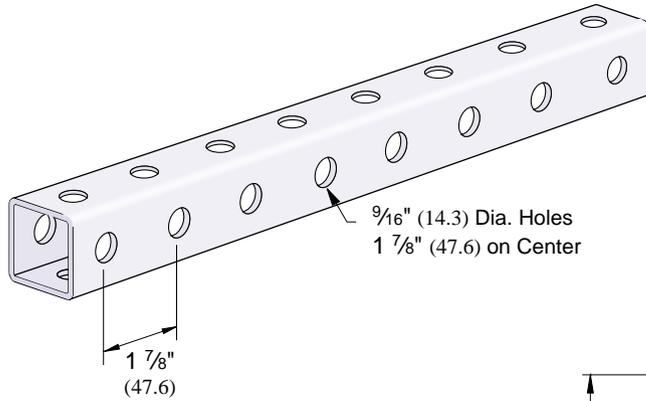
Note: For beam load capacity, use 90% of appropriate load chart.

**P9000 & P9200 TELESTRUT®**  
FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

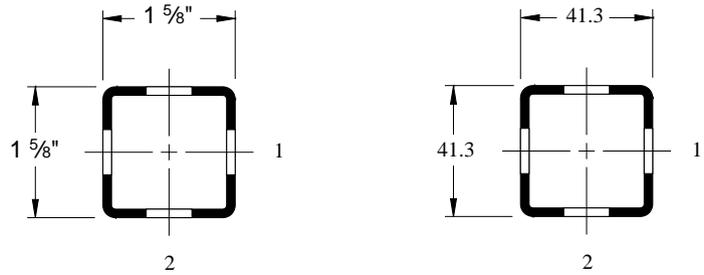


**P9000**

TELESTRUT TUBING



PATENT PENDING

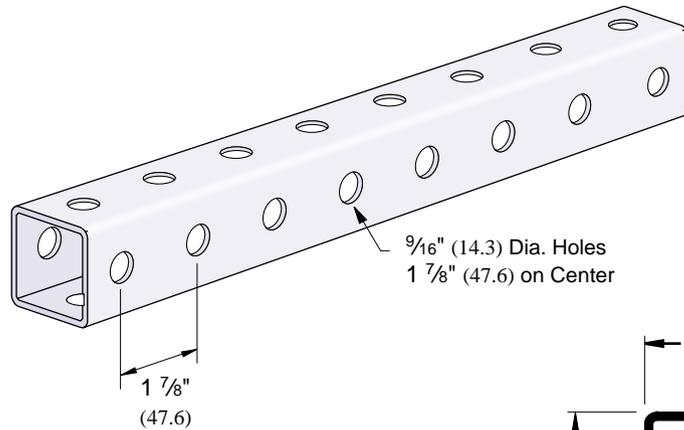


Note: Can be used with 1 5/8" (41mm) fittings.

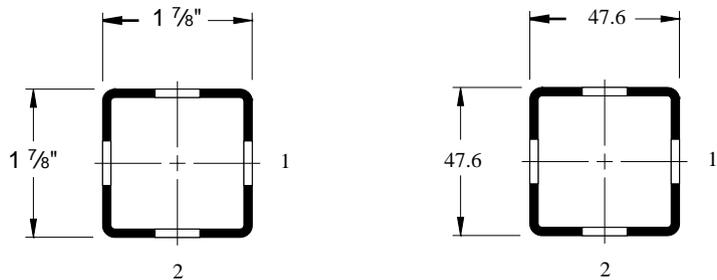
Weight: 205 Lbs/C Ft (305 kg/100 m)

**P9200**

TELESTRUT TUBING



PATENT PENDING



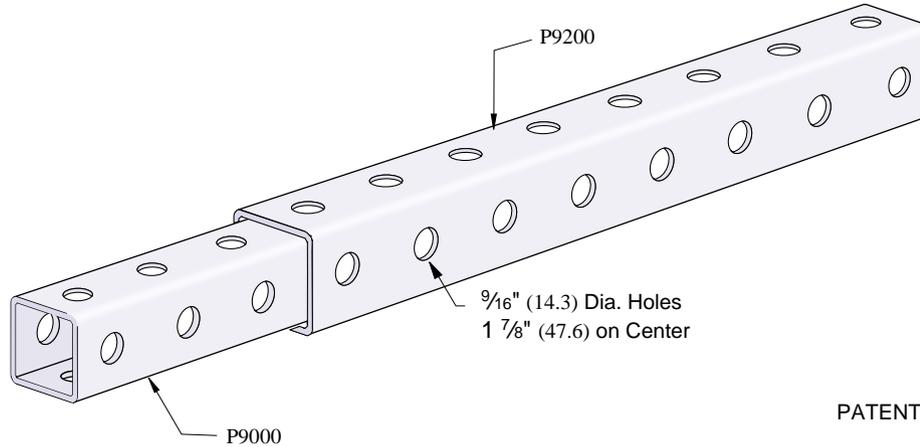
Note: Allows telescoping of P9000 and all 1 5/8" (41mm) Unistrut channels.

Weight: 223 Lbs/C Ft (332 kg/100 m)

Telestrut	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N·m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
<b>P9000</b>	2.05	3.1	5,060	570	.105	2.7	■	■	■	■		■		
<b>P9200</b>	2.23	3.3	7,470	840	.105	2.7	■	■	■	■		■		

Nominal thickness of 12 gage strip steel is .105 inches.

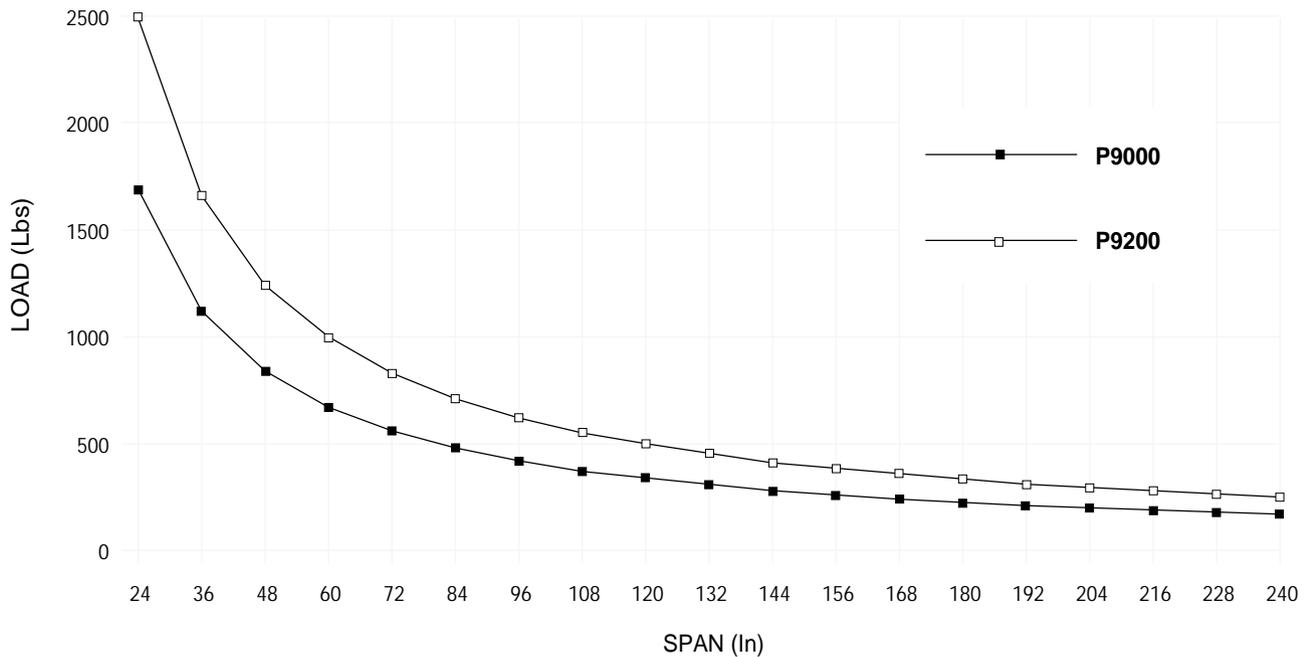
## TELESTRUT TUBING



PATENT PENDING

Note: See Hardware section for rivets and gravity pins.

## BEAM LOAD\*



\*Maximum allowable uniform load.

## BEAM LOADING DATA

Span		Telestrut	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	<b>P9000</b>	1690	7.5	0.06	2	1690	7.5	1690	7.5	1690	7.5
		<b>P9200</b>	2490	11.1	0.05	1	2490	11.1	2490	11.1	2490	11.1
36	914	<b>P9000</b>	1120	5.0	0.14	4	1120	5.0	1120	5.0	800	3.6
		<b>P9200</b>	1660	7.4	0.12	3	1660	7.4	1660	7.4	1350	6.0
48	1219	<b>P9000</b>	840	3.7	0.25	6	840	3.7	670	3.0	450	2.0
		<b>P9200</b>	1240	5.5	0.22	6	1240	5.5	1140	5.1	760	3.4
60	1524	<b>P9000</b>	670	3.0	0.39	10	570	2.5	430	1.9	290	1.3
		<b>P9200</b>	1000	4.4	0.34	9	970	4.3	730	3.2	490	2.2
72	1829	<b>P9000</b>	560	2.5	0.56	14	400	1.8	300	1.3	200	0.9
		<b>P9200</b>	830	3.7	0.49	12	670	3.0	510	2.3	340	1.5
84	2134	<b>P9000</b>	480	2.1	0.77	19	290	1.3	220	1.0	150	0.7
		<b>P9200</b>	710	3.2	0.67	17	500	2.2	370	1.6	250	1.1
96	2438	<b>P9000</b>	420	1.9	1.00	25	220	1.0	170	0.8	110	0.5
		<b>P9200</b>	620	2.8	0.87	22	380	1.7	280	1.2	190	0.8
108	2743	<b>P9000</b>	370	1.6	1.25	32	180	0.8	130	0.6	90	0.4
		<b>P9200</b>	550	2.4	1.10	28	300	1.3	220	1.0	150	0.7
120	3048	<b>P9000</b>	340	1.5	1.58	40	140	0.6	110	0.5	70	0.3
		<b>P9200</b>	500	2.2	1.37	35	240	1.1	180	0.8	120	0.5
144	3658	<b>P9000</b>	280	1.2	2.25	57	100	0.4	70	0.3	50	0.2
		<b>P9200</b>	410	1.8	1.94	49	170	0.8	130	0.6	80	0.4
168	4267	<b>P9000</b>	240	1.1	3.06	78	70	0.3	50	0.2	40	0.2
		<b>P9200</b>	360	1.6	2.7	69	120	0.5	90	0.4	60	0.3
192	4877	<b>P9000</b>	210	0.9	4.00	102	60	0.3	40	0.2	NR	NR
		<b>P9200</b>	310	1.4	3.48	88	90	0.4	70	0.3	50	0.2
216	5486	<b>P9000</b>	190	0.8	5.15	131	NR	NR	NR	NR	NR	NR
		<b>P9200</b>	280	1.2	4.48	114	70	0.3	60	0.3	40	0.2
240	6096	<b>P9000</b>	170	0.8	6.32	161	NR	NR	NR	NR	NR	NR
		<b>P9200</b>	250	1.1	5.49	139	60	0.3	50	0.2	30	0.1

NR = Not Recommended

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

## COLUMN LOADING DATA

Unbraced Height		Telestrut	Max. Design Load Applied at Col. Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	<b>P9000</b>	3420	15.2	8230	36.6	8140	36.2	7990	35.5	7810	34.7
		<b>P9200</b>	4420	19.7	10530	46.8	10450	46.5	10310	45.9	10130	45.1
36	914	<b>P9000</b>	3240	14.4	8010	35.6	7810	34.7	7480	33.3	7070	31.4
		<b>P9200</b>	4240	18.9	10330	46.0	10130	45.1	9820	43.7	9430	41.9
48	1219	<b>P9000</b>	3010	13.4	7710	34.3	7350	32.7	6760	30.1	6040	26.9
		<b>P9200</b>	4010	17.8	10040	44.7	9700	43.1	9130	40.6	8450	37.6
60	1524	<b>P9000</b>	2750	12.2	7320	32.6	6760	30.1	5840	26.0	4720	21.0
		<b>P9200</b>	3740	16.6	9660	43.0	9130	40.6	8250	36.7	7180	31.9
72	1829	<b>P9000</b>	2470	11.0	6840	30.4	6040	26.9	4720	21.0	3330	14.8
		<b>P9200</b>	3440	15.3	9210	41.0	8450	37.6	7180	31.9	5630	25.0
84	2134	<b>P9000</b>	2180	9.7	6280	27.9	5190	23.1	3520	15.7	2440	10.9
		<b>P9200</b>	3130	13.9	8670	38.6	7630	33.9	5910	26.3	4150	18.5
96	2438	<b>P9000</b>	1890	8.4	5630	25.0	4210	18.7	2690	12.0	1870	8.3
		<b>P9200</b>	2810	12.5	8050	35.8	6690	29.8	4570	20.3	3180	14.1
108	2743	<b>P9000</b>	1630	7.3	4900	21.8	3330	14.8	2130	9.5	1480	6.6
		<b>P9200</b>	2490	11.1	7350	32.7	5630	25.0	3610	16.1	2510	11.2
120	3048	<b>P9000</b>	1410	6.3	4080	18.1	2690	12.0	1720	7.7	**	**
		<b>P9200</b>	2180	9.7	6570	29.2	4570	20.3	2930	13.0	2030	9.0

\*\* $\frac{KL}{r} > 200$

## ELEMENTS OF SECTION

Telestrut	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In <sup>2</sup>	cm <sup>2</sup>	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm
<b>P9000</b>	.384	2.5	.164	6.8	.203	3.3	.653	1.7	.164	6.8	.203	3.3	.653	1.7
<b>P9200</b>	.489	3.2	.278	11.6	.297	4.9	.754	1.9	.278	11.6	.297	4.9	.754	1.9

I - Moment of Inertia

S - Section Modulus

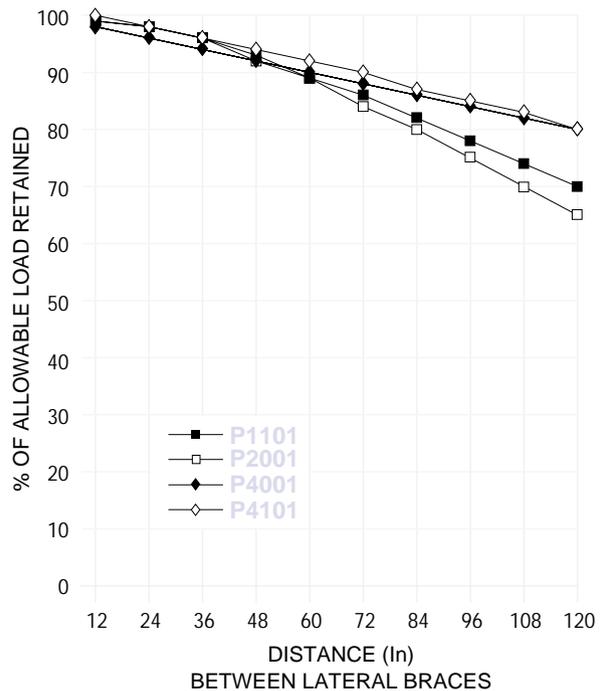
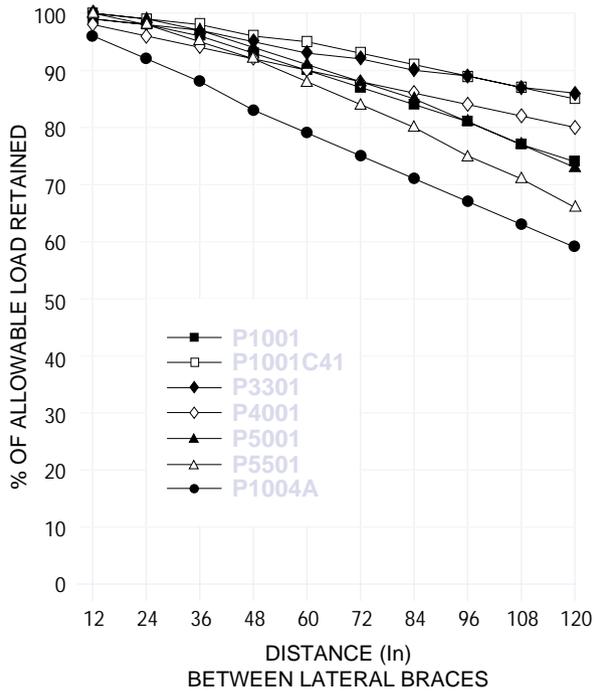
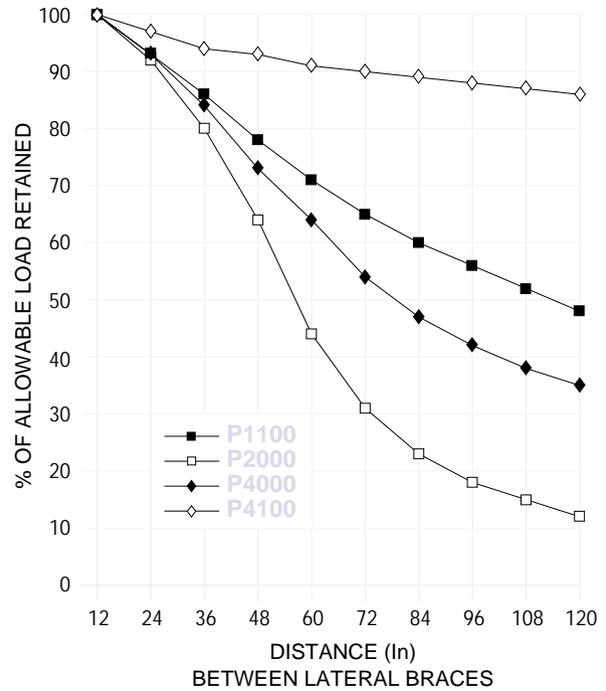
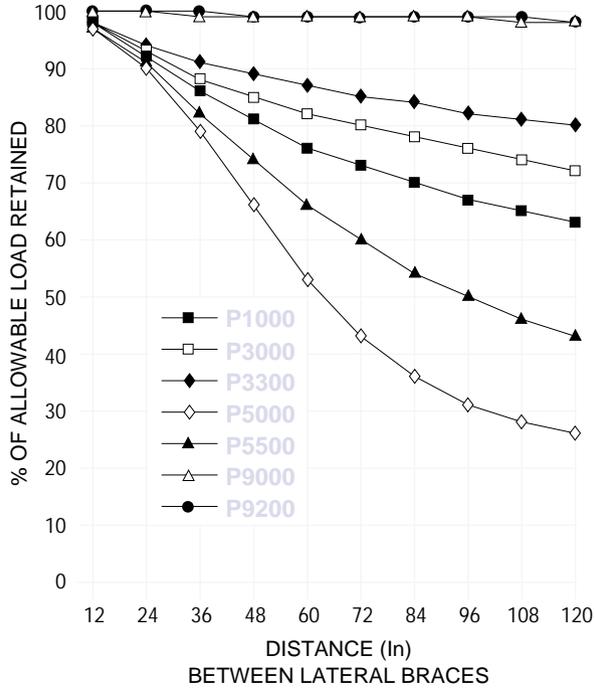
r - Radius of Gyration

# LATERAL BRACING REDUCTIONS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## LATERAL BRACING LOAD REDUCTION CHARTS



# BEARING LOADS FOR CHANNEL & COMBINATIONS

FOR 1 5/8" (41 mm) WIDTH SERIES CHANNEL

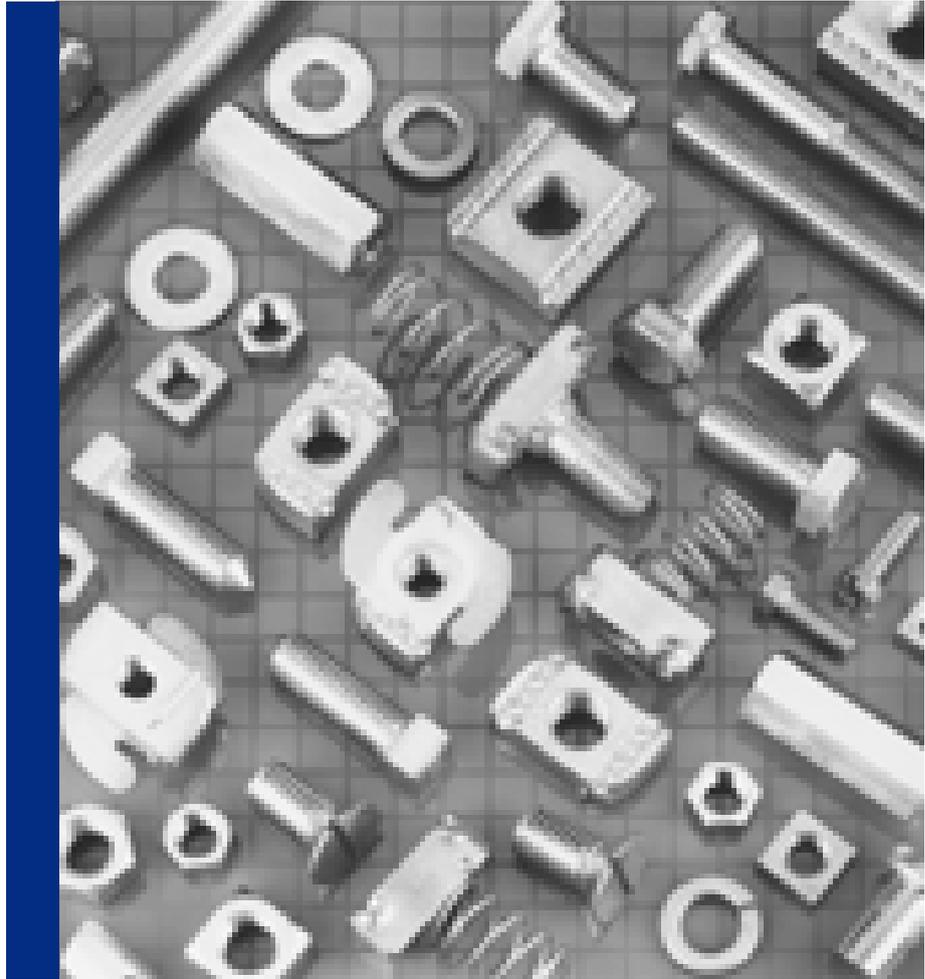


## BEARING LOADS ON UNISTRUT CHANNELS

Channel	Bearing Length 1 5/8" (41 mm)		Bearing Length 1 5/8" (41 mm)		Bearing Length 3/4"(92 mm)	
	Maximum Allowable Loads		Maximum Allowable Loads		Maximum Allowable Loads	
	Lbs	kN	Lbs	kN	Lbs	kN
<b>P1000</b>	5000	22.2	3500	15.6	8000	35.6
<b>P1100</b>	3500	15.6	2500	11.1	5500	24.5
<b>P2000</b>	2000	8.9	1500	6.7	3000	13.3
<b>P3000</b>	5000	22.2	3500	15.6	8000	35.6
<b>P3300</b>	6000	26.7	4000	17.8	9000	40.0
<b>P4000</b>	2200	9.8	1700	7.6	3500	15.6
<b>P4100</b>	3400	15.1	2600	11.6	4800	21.4
<b>P5000</b>	4000	17.8	2000	8.9	5500	24.5
<b>P5500</b>	5000	22.2	3500	15.6	8000	35.6
<b>P9000</b>	5000	22.2	3500	15.6	8000	35.6
<b>P9200</b>	5000	22.2	3500	15.6	8000	35.6

Safety Factor — 2 1/2

	Page
Channel Nut Selection Chart	70
Channel Nuts With Springs	72
Channel Nuts Without Springs	73
Top Retainer Nuts	74
Stud Nuts	74
Hardware	75



**MATERIAL**

Unistrut channel nuts are manufactured from mild steel bars, and after machining operations are completed, they are case hardened, assuring positive biting action into the inturned edge of the Unistrut channel.

The standard channel nut conforms to ASTM A576 GR 1015. Screws conform to SAE J429 GR 2 (also meets and exceeds ASTM A307).

**FINISHES**

Nuts, bolts and washers are electro-galvanized (EG), ASTM B633 Type III SC1 finish, unless otherwise noted.

Many hardware items are also available in stainless steel. Consult factory for ordering information.

**THREADS**

All threads on the nuts and bolts are Unified and American coarse screw threads.

**DESIGN BOLT TORQUE**

<b>BOLT SIZE</b>	¼"	5/16"	3/8"	½"	5/8"	¾"
<b>FOOT LBS.</b>	6	11	19	50	100	125
<b>N·m</b>	8	15	25	70	135	170

**DIMENSIONS**

Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

Many Unistrut nuts, bolts and hardware items are also available in standard metric dimensions. Consult factory for ordering information.

# CHANNEL NUT LOAD DATA

FOR 1<sup>5</sup>/<sub>8</sub>" (41 MM) WIDTH SERIES CHANNEL



## MAXIMUM ALLOWABLE PULL-OUT AND SLIP LOADS

Channel Nut Size/Thread	Gage	Channel	Allowable Pull-Out Strength		Resistance to Slip		Torque	
			Lbs	kN	Lbs	kN	Ft Lbs	N•m
3/4" - 10	12	<b>P1000 P3000 P5000 P5500</b>	2500	11.1	1700	7.6	125*	170
5/8" - 11			2500	11.1	1500	6.7	100*	135
1/2" - 13			2000	8.9	1500	6.7	50	70
7/16" - 14			1400	6.2	1000	4.4	35	50
3/8" - 16			1000	4.4	800	3.6	19	25
5/16" - 18			800	3.6	500	2.2	11	15
1/4" - 20			600	2.7	300	1.3	6	8
1/2" - 13	12	<b>P3300</b>	1500	6.7	1500	6.7	50	70
3/8" - 16			1000	4.4	800	3.6	19	25
5/16" - 18			800	3.6	500	2.2	11	15
1/4" - 20			600	2.7	300	1.3	6	8
1/2" - 13	14	<b>P1100 &amp; P4100</b>	1400	6.2	1000	4.4	50	70
3/8" - 16			1000	4.4	750	3.3	19	25
5/16" - 18			800	3.6	400	1.8	11	15
1/4" - 20			600	2.7	300	1.3	6	8
1/2" - 13	16	<b>P2000 &amp; P4000</b>	1000	4.4	1000	4.4	50	70
3/8" - 16			1000	4.4	750	3.3	19	25
5/16" - 18			800	3.6	400	1.8	11	15
1/4" - 20			600	2.7	300	1.3	6	8

\* May require 3/8" or 1/2" thick fitting.

Nut design loads include a minimum safety factor of 3.

Note: Refer to the Channel Nut Selection Chart on the following two pages for the part number.

# CHANNEL NUT SELECTION CHART

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



Channel Nut Part Number	Nut Size/ Thread	CHANNEL								
		P1000	P1100	P2000	P3000	P3300	P4000	P4100	P5000	P5500
P1006-0832	#8 - 32	■	■	■	■					
P1006-1024	#10 - 24	■	■	■	■					
P1006-1420	¼" - 20	■	■	■	■					
P1006T1420	¼" - 20	■	■	■	■	■	■	■	■	■
P1007	5/16" - 18	■	■	■	■					
P1008	3/8" - 16	■	■	■	■					
P1008T	3/8" - 16	■	■	■	■	■	■	■	■	■
P1009	7/16" - 14	■	■	■	■					
P1010	½" - 13	■	■	■	■					
P1010T	½" - 13	■	■	■	■				■	■
P1012	5/8" - 11	■	■	■	■				■	■
P1012S	5/8" - 11	■	■	■	■					
P1023	¾" - 10	■	■	■	■				■	■
P1023S	¾" - 10	■	■	■	■					
P1024	7/8" - 9	■	■	■	■				■	■
P1024S	7/8" - 9	■	■	■	■					
P3006-0832	#8 - 32	■	■	■	■	■	■	■	■	■
P3006-1024	#10 - 24	■	■	■	■	■	■	■	■	■
P3006-1420	¼" - 20	■	■	■	■	■	■	■	■	■
P3007	5/16" - 18	■	■	■	■	■	■	■	■	■
P3008	3/8" - 16	■	■	■	■	■	■	■	■	■
P3009	7/16" - 14	■	■	■	■	■	■	■	■	■
P3010	½" - 13	■	■	■	■				■	■
P3013	½" - 13					■	■	■		

# CHANNEL NUT SELECTION CHART

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



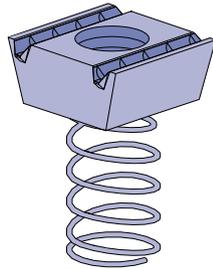
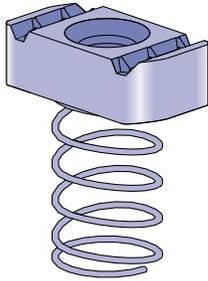
Channel Nut Part Number	Nut Size/ Thread	CHANNEL								
		P1000	P1100	P2000	P3000	P3300	P4000	P4100	P5000	P5500
P3016-0632	#6 - 32	■	■	■	■	■	■	■	■	■
P3016-0832	#8 - 32	■	■	■	■	■	■	■	■	■
P3016-1024	#10 - 24	■	■	■	■	■	■	■	■	■
P3016-1420	1/4" - 20	■	■	■	■	■	■	■	■	■
P4006-0832	# 8 - 32					■	■	■		
P4006-1024	#10 - 24					■	■	■		
P4006-1420	1/4" - 20					■	■	■		
P4007	5/16" - 18					■	■	■		
P4008	3/8" - 16					■	■	■		
P4009	7/16" - 14					■	■	■		
P4010	1/2" - 13					■	■	■		
P4010T	1/2" - 13					■	■	■		
P4012	5/8" - 11					■	■	■		
P4012S	5/8" - 11					■	■	■		
P4023	3/4" - 10					■	■	■		
P4023S	3/4" - 10					■	■	■		
P5506-0832	#8 - 32									■
P5506-1024	#10 - 24									■
P5506-1420	1/4" - 20									■
P5507	5/16" - 18									■
P5508	3/8" - 16									■
P5509	7/16" - 14									■
P5510	1/2" - 13									■

# CHANNEL NUTS WITH SPRINGS

FOR 1 $\frac{5}{8}$ " (41 MM) WIDTH SERIES CHANNEL



## P1006-0832 thru P1024S



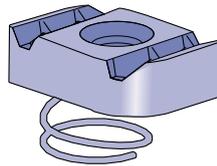
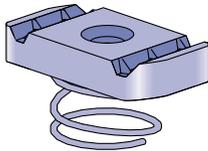
Note: Use with P1000, P1100,  
P2000 & P3000 channels.

### CHANNEL NUTS WITH SPRINGS

Part Number	Size & Thread	Weight/C	
		Lbs	kg
<b>P1006-0832</b>	#8 - 32	7	3.2
<b>P1006-1024</b>	#10 - 24	7	3.2
<b>P1006-1420</b>	1/4" - 20	7	3.2
<b>P1007</b>	5/16" - 18	6	2.7
<b>P1008</b>	3/8" - 16	10	4.5
<b>P1009</b>	7/16" - 14	9	4.1
<b>P1010</b>	1/2" - 13	12	5.4

<b>P1012S</b>	5/8" - 11	21	9.5
<b>P1023S</b>	3/4" - 10	21	9.5
<b>P1024S</b>	7/8" - 9	21	9.5

## P4006-0832 thru P4023S



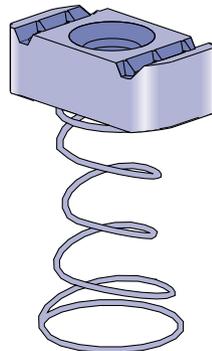
Note: Use with P3300, P4000  
& P4100 channels.

### CHANNEL NUTS WITH SPRINGS

Part Number	Size & Thread	Weight/C	
		Lbs	kg
<b>P4006-0832</b>	#8 - 32	7	3.2
<b>P4006-1024</b>	#10 - 24	7	3.2
<b>P4006-1420</b>	1/4" - 20	7	3.2
<b>P4007</b>	5/16" - 18	6	2.7
<b>P4008</b>	3/8" - 16	9	4.1
<b>P4009</b>	7/16" - 14	9	4.1
<b>P4010</b>	1/2" - 13	8	3.6

<b>P4012S</b>	5/8" - 11	11	5.0
<b>P4023S</b>	3/4" - 10	11	5.0

## P5506-0832 thru P5510



Note: Use with P5500 channels.

### CHANNEL NUTS WITH SPRINGS

Part Number	Size & Thread	Weight/C	
		Lbs	kg
<b>P5506-0832</b>	#8 - 32	7	3.2
<b>P5506-1024</b>	#10 - 24	7	3.2
<b>P5506-1420</b>	1/4" - 20	7	3.2
<b>P5507</b>	5/16" - 18	6	2.7
<b>P5508</b>	3/8" - 16	10	4.5
<b>P5509</b>	7/16" - 14	10	4.5
<b>P5510</b>	1/2" - 13	12	5.4

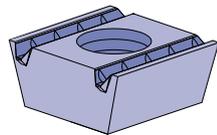
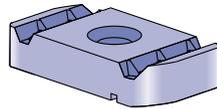
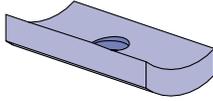
# CHANNEL NUTS WITHOUT SPRINGS

FOR 1<sup>5</sup>/<sub>8</sub>" (41 MM) WIDTH SERIES CHANNEL



## P1012 thru P3016-1420

## CHANNEL NUTS WITHOUT SPRINGS



Note: Use with P1000, P1100, P2000, P3000, P5000 & P5500 channels.

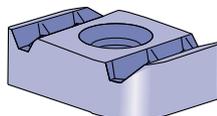
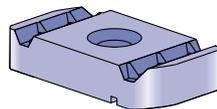
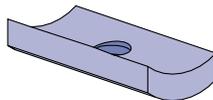
Part Number	Size & Thread	Weight/C	
		Lbs	kg
<b>P3016-0632</b>	#6 - 32	2	.9
<b>P3016-0832</b>	#8 - 32	2	.9
<b>P3016-1024</b>	#10 - 24	4	1.8
<b>P3016-1420</b>	1/4" - 20	4	1.8

<b>P3006-0832</b>	#8 - 32	6	2.7
<b>P3006-1024</b>	#10 - 24	6	2.7
<b>P3006-1420</b>	1/4" - 20	6	2.7
<b>P3007</b>	5/16" - 18	6	2.7
<b>P3008</b>	3/8" - 16	9	4.1
<b>P3009</b>	7/16" - 14	9	4.1
<b>P3010</b>	1/2" - 13	11	5.0

<b>P1012</b>	5/8" - 11	20	9.1
<b>P1023</b>	3/4" - 10	20	9.1
<b>P1024</b>	7/8" - 9	20	9.1

## P3006-0832 thru P4023

## CHANNEL NUTS WITHOUT SPRINGS



Note: Use with P3300, P4000 & P4100 channels.

Part Number	Size & Thread	Weight/C	
		Lbs	kg
<b>P3016-0632</b>	#6 - 32	2	.9
<b>P3016-0832</b>	#8 - 32	2	.9
<b>P3016-1024</b>	#10 - 24	4	1.8
<b>P3016-1420</b>	1/4" - 20	4	1.8

<b>P3006-0832</b>	#8 - 32	6	2.7
<b>P3006-1024</b>	#10 - 24	6	2.7
<b>P3006-1420</b>	1/4" - 20	6	2.7
<b>P3007</b>	5/16" - 18	6	2.7
<b>P3008</b>	3/8" - 16	9	4.1
<b>P3009</b>	7/16" - 14	9	4.1
<b>P3013</b>	1/2" - 13	8	3.6

<b>P4012</b>	5/8" - 11	10	4.5
<b>P4023</b>	3/4" - 10	10	4.5

# CHANNEL NUTS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



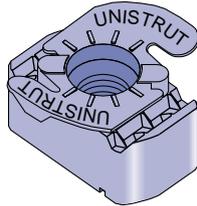
**P1006T1420**

**P1008T**

**P1010T**

**P4010T**

TOP RETAINER NUT

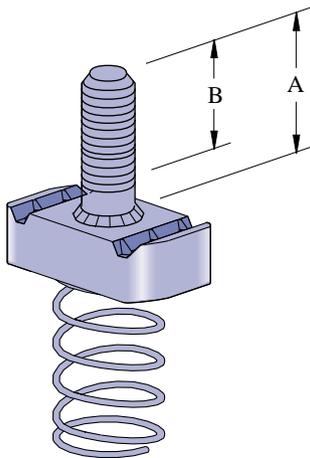


Part Number	Size & Thread	Weight/C	
		Lbs	kg
<b>P1006T1420</b>	1/4" - 20	7	3.2
<b>P1008T</b>	3/8" - 16	10	4.5
<b>P1010T</b>	1/2" - 13	12	5.4
<b>P4010T</b>	1/2" - 13	8	3.6

Note: For appropriate channel see Channel Nut Selection Chart.

## P2378-1 thru P2382-3

STUD NUTS



Part Number	Size & Thread	"A" Stud Length In	"B" Thread Length In	Weight/C	
				Lbs	kg
<b>P2378-1</b> <b>P2378-2</b> <b>P2378-3</b>	1/4" - 20	7/8	5/8	8	3.6
1 1/8		7/8	9	4.1	
1 3/8		1 1/8	9	4.1	
<b>P2379-1</b> <b>P2379-2</b> <b>P2379-3</b>	5/16" - 18	7/8	5/8	12	5.4
1 1/8		7/8	12	5.4	
1 3/8		1 1/8	13	5.9	
<b>P2380-1</b> <b>P2380-2</b> <b>P2380-3</b> <b>P2380-4</b> <b>P2380-5</b> <b>P2380-6</b>	3/8" - 16	7/8	5/8	13	5.9
1 1/8		7/8	13	5.9	
1 3/8		1 1/8	13	5.9	
1 5/8		1 3/8	15	6.8	
1 7/8		1 5/8	16	7.3	
2 1/8		1 7/8	16	7.3	
<b>P2381-2</b> <b>P2381-3</b> <b>P2381-4</b> <b>P2381-5</b> <b>P2381-6</b> <b>P2381-7</b>	1/2" - 13	7/8	1/2	14	6.4
1 1/8		3/4	15	6.8	
1 3/8		1	17	7.7	
1 5/8		1 1/4	18	8.2	
1 7/8		1 1/2	19	8.6	
2 1/8		1 3/4	20	9.1	
<b>P2382-2</b> <b>P2382-3</b>	5/8" - 11	1 1/8	5/8	18	8.2
1 3/8		7/8	20	9.1	

Note: Use with P1000, P1100, P2000 & P3000 channels.

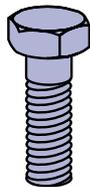
All Stud Nut grooves are serrated. Special stud lengths and thread lengths can be supplied upon request.

# HARDWARE

FOR 1<sup>5</sup>/<sub>8</sub>" (41 MM) WIDTH SERIES CHANNEL

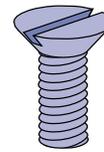


## HEX HEAD CAP SCREWS



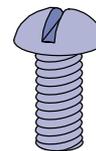
Part Number	Size	Weight/C	
		Lbs	kg
HHCS025044EG	1/4" x 7/16"	1.0	0.5
HHCS025075EG	1/4" x 3/4"	1.3	0.6
HHCS025150EG	1/4" x 1 1/2"	2.6	1.2
HHCS031125EG	5/16" x 1 1/4"	3.6	1.6
HHCS037075EG	3/8" x 3/4"	4.0	1.8
HHCS037087EG	3/8" x 7/8"	4.4	2.0
HHCS037100EG	3/8" x 1"	4.5	2.0
HHCS037125EG	3/8" x 1 1/4"	5.3	2.4
HHCS037150EG	3/8" x 1 1/2"	6.0	2.7
HHCS037200EG	3/8" x 2"	7.6	3.4
HHCS037225EG	3/8" x 2 1/4"	8.4	3.8
HHCS037250EG	3/8" x 2 1/2"	9.2	4.2
HHCS050094EG	1/2" x 1 5/16"	9.1	4.1
HHCS050119EG	1/2" x 1 3/16"	10.2	4.6
HHCS050150EG	1/2" x 1 1/2"	11.6	5.3
HHCS050175EG	1/2" x 1 3/4"	13.1	5.9
HHCS050200EG	1/2" x 2"	14.6	6.6
HHCS050225EG	1/2" x 2 1/4"	16.0	7.3
HHCS050250EG	1/2" x 2 1/2"	17.5	7.9

## FLAT HEAD MACHINE SCREWS



Part Number	Size	Weight/C	
		Lbs	kg
HFMS025062EG	1/4" x 5/8"	1.2	0.5
HFMS031100EG	5/16" x 1"	2.6	1.2
HFMS050100EG	1/2" x 1"	9.3	4.2

## ROUND HEAD MACHINE SCREWS



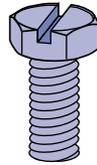
Part Number	Size	Weight/C	
		Lbs	kg
HRMS025050EG	1/4" x 1/2"	1.0	0.5
HRMS025075EG	1/4" x 3/4"	1.2	0.5
HRMS025100EG	1/4" x 1"	1.5	0.7
HRMS031100EG	5/16" x 1"	2.6	1.2
HRMS031125EG	5/16" x 1 1/4"	3.0	1.4
HRMS037100EG	3/8" x 1"	4.1	1.9
HRMS037125EG	3/8" x 1 1/4"	4.7	2.1
HRMS037150EG	3/8" x 1 1/2"	5.3	2.4

# HARDWARE

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## HEX SLOTTED MACHINE SCREWS



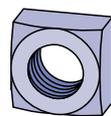
Part Number	Size	Weight/C	
		Lbs	kg
<b>HSHS025050EG</b>	¼" x ½"	1.4	0.6
<b>HSHS025062EG</b>	¼" x ⅝"	1.5	0.7
<b>HSHS025075EG</b>	¼" x ¾"	1.7	0.8
<b>HSHS031100EG</b>	⅕" x 1"	2.6	1.2
<b>HSHS031125EG</b>	⅕" x 1¼"	3.0	1.4
<b>HSHS031150EG</b>	⅕" x 1½"	3.4	1.5
<b>HSHS037125EG</b>	⅜" x 1¼"	5.3	2.4

## CONE POINT SET SCREWS



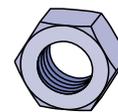
Part Number	Size	Weight/C	
		Lbs	kg
<b>HCSS025100EG</b>	¼" x 1"	2.8	1.3
<b>HCSS031150EG</b>	⅕" x 1½"	3.9	1.8
<b>HCSS037150EG</b>	⅜" x 1½"	4.5	2.0
<b>HCSS037200EG</b>	⅜" x 2"	6.1	2.8
<b>HCSS050150EG</b>	½" x 1½"	8.5	3.9
<b>HCSS050200EG</b>	½" x 2"	11.4	5.2
<b>HCSS062150EG</b>	⅝" x 1½"	14.5	6.6
<b>HCSS062200EG</b>	⅝" x 2"	23.0	10.4

## SQUARE NUTS



Part Number	Size	Weight/C	
		Lbs	kg
<b>HSQN025EG</b>	¼"	0.9	0.4
<b>HSQN031EG</b>	⅕"	1.6	0.7
<b>HSQN037EG</b>	⅜"	2.7	1.2
<b>HSQN050EG</b>	½"	5.8	2.6
<b>HSQN062EG</b>	⅝"	10.7	4.9
<b>HSQN087EG</b>	⅞"	24.9	11.3
<b>HSQN100EG</b>	1"	36.3	16.5

## HEXAGON NUTS



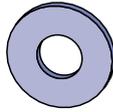
Part Number	Size	Weight/C	
		Lbs	kg
<b>HHXN025EG</b>	¼"	0.6	0.3
<b>HHXN031EG</b>	⅕"	1.2	0.5
<b>HHXN037EG</b>	⅜"	1.6	0.7
<b>HHXN050EG</b>	½"	4.8	2.2
<b>HHXN062EG</b>	⅝"	7.3	3.3
<b>HHXN087EG</b>	⅞"	19.0	8.6
<b>HHXN100EG</b>	1"	28.3	12.8

# HARDWARE

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

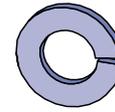


## FLAT WASHERS



Part Number	Size	Weight/C	
		Lbs	kg
HFLW025EG	1/4"	0.8	0.4
HFLW031EG	5/16"	1.0	0.5
HFLW037EG	3/8"	1.5	0.7
HFLW050EG	1/2"	3.5	1.6
HFLW062EG	5/8"	7.7	3.5
HFLW075EG	3/4"	11.0	5.0
HFLW087EG	7/8"	15.3	6.9
HFLW100EG	1"	18.8	8.5

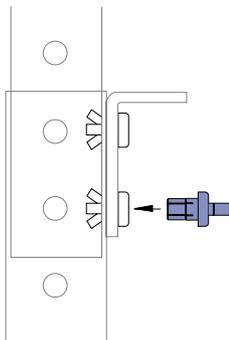
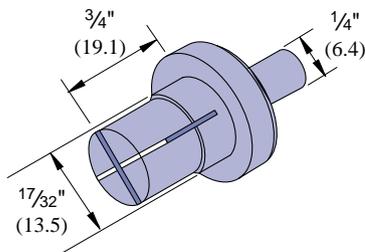
## LOCK WASHERS



Part Number	Size	Weight/C	
		Lbs	kg
HLKW025EG	1/4"	0.25	0.1
HLKW031EG	5/16"	0.41	0.2
HLKW037EG	3/8"	0.63	0.3
HLKW050EG	1/2"	1.32	0.6
HLKW062EG	5/8"	2.20	1.0
HLKW075EG	3/4"	3.80	1.7
HLKW087EG	7/8"	6.0	2.7
HLKW100EG	1"	8.8	4.0

## P9010

### RIVET

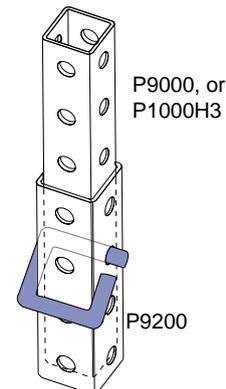
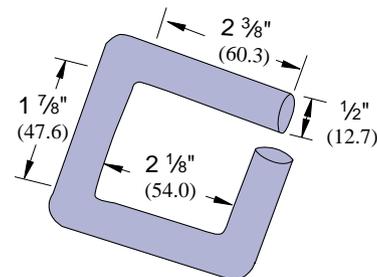


For use with P9000, P9200 & P1000 H3

Wt/C 10.0 Lbs (4.5 kg).

## P9209

### GRAVITY PIN



For use with P9000, P9200 & P1000 H3.

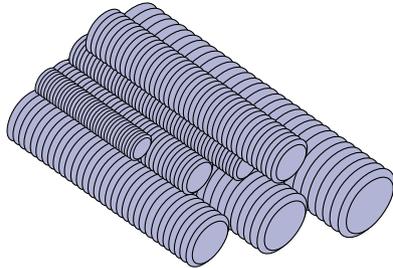
Wt/C 10.0 Lbs (4.5 kg)

# HARDWARE

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## STEEL THREADED ROD



Part Number	Size	Thread per Inch	Weight/C Ft.	
			Lbs	kg
<b>HTHR025</b>	¼"	20	13	5.9
<b>HTHR031</b>	⅕"	18	20	9.1
<b>HTHR037</b>	⅜"	16	30	13.6
<b>HTHR044</b>	⅞"	14	30	13.6
<b>HTHR050</b>	½"	13	53	24.0
<b>HTHR062</b>	⅝"	11	84	38.1
<b>HTHR075</b>	¾"	10	124	56.2
<b>HTHR087</b>	⅞"	9	170	77.1
<b>HTHR100</b>	1"	8	223	101.2

### Load Carrying Capacity of Threaded Hot Rolled Steel Conforming to ASTM A575 and A576

Nominal Diameter	Root Area		Maximum Safe Load at 650°F (343°C)	
	In <sup>2</sup>	mm <sup>2</sup>	Lbs	kN
⅜	0.068	43.9	610	2.7
½	0.126	81.3	1,130	5.0
⅝	0.202	130.3	1,810	8.0
¾	0.302	194.8	2,710	12.0
⅞	0.419	270.3	3,770	16.8
1	0.552	356.1	4,960	22.1
1⅝	0.693	447.1	6,230	27.7
1¼	0.889	573.5	8,000	35.6
1⅜	1.053	679.4	9,470	42.1
1½	1.293	834.2	11,630	51.7
1⅞	1.515	977.4	13,630	60.6
1¾	1.714	1105.8	15,690	69.8
1⅞	2.048	1321.3	18,430	82.0
2	2.292	1478.7	20,690	92.0

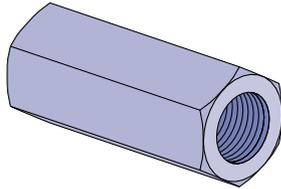
"Extracted from American Standard Code for pressure piping (ASA B31.1-1973, with permission of the publisher, the American Society of Mechanical Engineers, United Engineering Center, 345 E. 47th Street, New York, New York)."

# HARDWARE

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



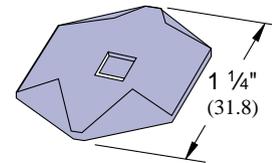
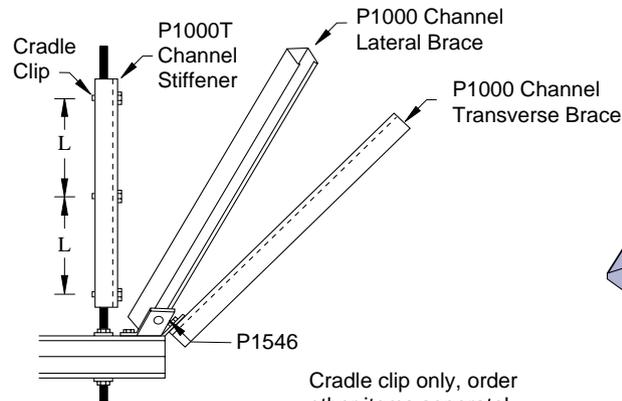
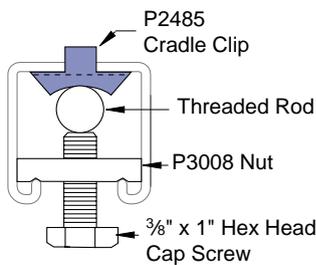
## STEEL COUPLER NUTS



Part Number	Size/Thread	Length	Weight/C	
			Lbs	kg
<b>HRCN025</b>	1/4" - 20	7/8"	1.9	0.9
<b>HRCN031</b>	5/16" - 18	1 3/4"	7.5	3.4
<b>HRCN037</b>	3/8" - 16	1 3/4"	9.0	4.1
<b>HRCN044</b>	7/16" - 14	1 3/4"	10.4	4.7
<b>HRCN050</b>	1/2" - 13	1 3/4"	10.0	4.5
<b>HRCN062</b>	5/8" - 11	2 1/8"	18.0	8.2
<b>HRCN075</b>	3/4" - 10	2 1/4"	28.0	12.7
<b>HRCN087</b>	7/8" - 9	2 1/2"	55.0	25.0
<b>HRCN100</b>	1" - 8	2 3/4"	73.0	33.1

## P2485

## CRADLE CLIP



Cradle clip only, order other items separately.

Refer to seismic bracing systems catalog.

Wt/C 3.0 Lbs (1.4 kg)

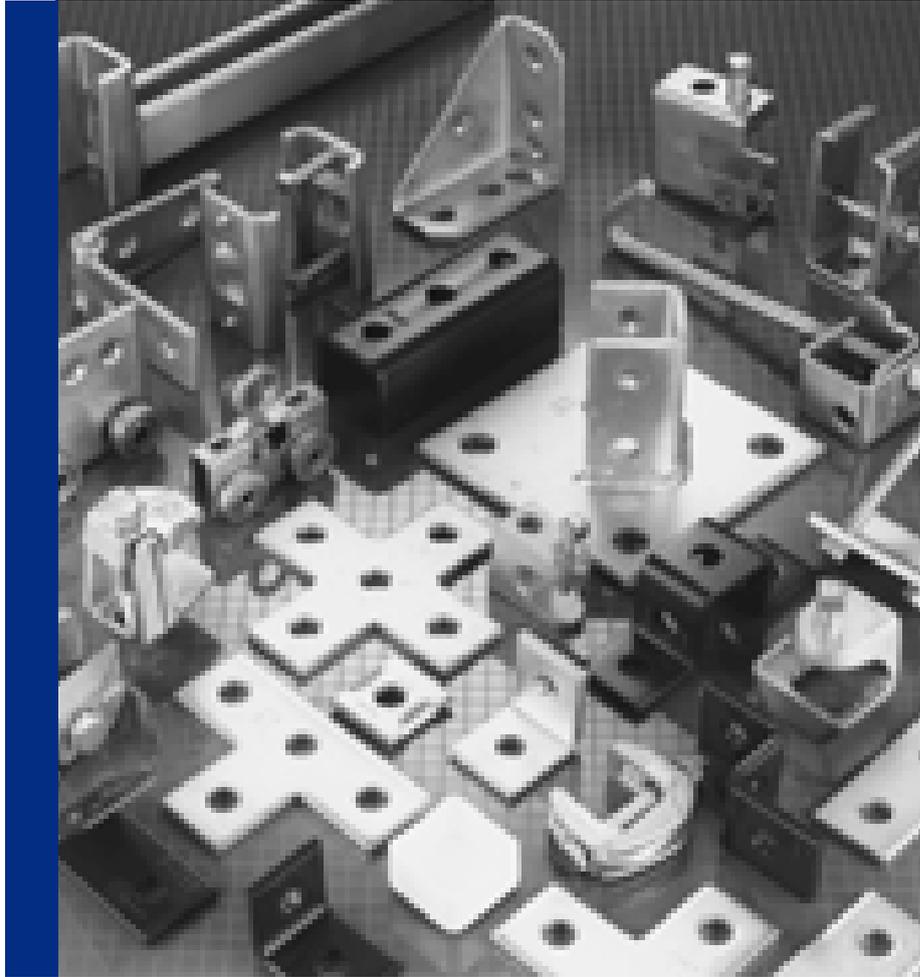
Rod Size	Root Area		Root Diameter		Radius of Gyration		Max. Allowable Rod Compression @ 100%		Clip Spacing (L) Rod Stress at					
									50% 4,500 PSI 31,026 kPa		75% 6,750 PSI 16,540 kPa		100% 9,000 PSI 62,053 kPa	
In	In <sup>2</sup>	mm <sup>2</sup>	In	mm	In	mm	Lbs	kN	In	mm	In	mm	In	mm
3/8	0.068	43.87	0.314	7.98	0.0785	1.99	610	2.7	14	356	12	305	10	254
1/2	0.126	81.29	0.425	10.80	0.1063	2.70	1130	5.0	20	508	16	406	14	356
5/8	0.202	130.3	0.536	13.61	0.1341	3.41	1810	8.1	24	610	20	508	16	406
3/4	0.302	194.8	0.652	16.56	0.1630	4.14	2710	12.1	30	762	24	610	20	508
7/8	0.419	270.3	0.730	18.54	0.183	4.65	3770	16.8	35	889	28	711	25	635
1	0.552	356.1	0.838	21.29	0.210	5.33	4960	22.1	40	1016	33	838	28	711

# GENERAL FITTINGS

FOR 1 $\frac{5}{8}$ " (41 MM) WIDTH SERIES CHANNEL



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"U" Shape Fittings	96
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## MATERIAL

Fittings, unless noted, are made from hot-rolled, pickled and oiled steel plates, strip or coil, and conform to ASTM specifications A575, A576, A635, or A36. The fitting steel also meets the physical requirements of ASTM A570 GR 33. The pickling of the steel produces a smooth surface free from scale.

Many fittings are also available in stainless steel, aluminum and fiberglass. Consult factory for ordering information.

## FINISHES

Fittings are available in: Perma-Green II (GR), electro-galvanized

(EG), conforming to ASTM B633 Type III SC1; Hot-dipped galvanized (HG), conforming to ASTM A123 or A153 and plain (PL).

## APPLICATION

All parts drawings illustrate only one application of each fitting. In most cases many other applications are possible. The channels shown in the illustrations are P1000, 1 $\frac{5}{8}$ " square, except where noted otherwise. All  $\frac{9}{16}$ " diameter holes use  $\frac{1}{2}$ " x  $\frac{15}{16}$ " hex head cap screws and  $\frac{1}{2}$ " nuts – P1010, P4010 or P5510 – depending on the channel used. Nuts and bolts are not included with the fitting and must be ordered separately.

## DESIGN BOLT TORQUE

BOLT SIZE	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
FOOT LBS.	20	18	16	13	11	10
N·m	6	11	19	50	100	125

## DIMENSIONS

Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

## DESIGN LOAD

Design load data, where shown, is based on the ultimate strength of the connection with a safety factor of 2.5, unless otherwise noted.

# DESIGN LOAD DATA

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## DESIGN LOAD DATA FOR TYPICAL UNISTRUT CHANNEL CONNECTIONS

90° Fittings (When used in position shown)										
Channel Thickness	P1026		P1026		P1325 P2235		P1458 P1579		P1346	
	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
12 ga.	1500	6.7	1000	4.4	2000	8.9	1500	6.7	2000	8.9
14 ga.	1000	4.4	650	2.9	2000	8.9	1000	4.4	1500	6.7
16 ga.	750	3.3	500	2.2	1500	6.7	1000	4.4	900	4.0

90° Fittings (When used in position shown)									Flat Plate Fittings	
Channel Thickness	P2484		P1068		P1326		P1346		P1065	
	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
12 ga.	3000	13.3	500	2.2	500	2.2	1200	5.3	1000	4.4
14 ga.	2000	8.9	500	2.2	500	2.2	1200	5.3	800	3.6
16 ga.	1500	6.7	500	2.2	500	2.2	1000	4.4	600	2.7

Both ends of beams supported.

Load diagrams indicate up to three design loads, one for 12 gage sections (P1000), one for 14 gage sections (P1100), and one for 16 gage sections (P2000).

Load data is based on P1010 nut and 1/2" bolt.

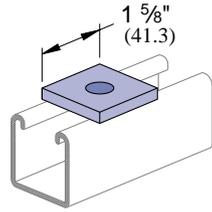
Safety factor = 2 1/2 based on ultimate strength of connection.

# FLAT PLATE FITTINGS

FOR 1 5/8" (41.3) WIDTH SERIES CHANNEL

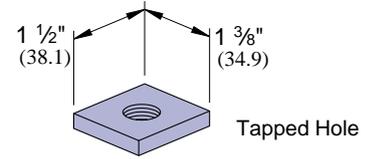


**P1062, P1063,  
P1064, P1964,  
P2471, P2490**



Part Number	Bolt Size	Hole Size	Weight/C	
			Lbs	kg
P1062	5/16"	1 1/32"	18	8.2
P1063	3/8"	7/16"	18	8.2
P1064	1/2"	9/16"	17	7.7
P1964	5/8"	1 1/16"	16	7.3
P2471	3/4"	1 3/16"	15	6.8
P2490	7/8"	1 5/16"	14	6.4

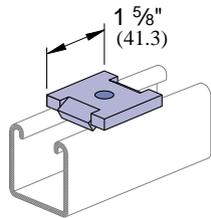
**P1959  
P1960  
P1961**



Material: 3/8" (9.5) thick.

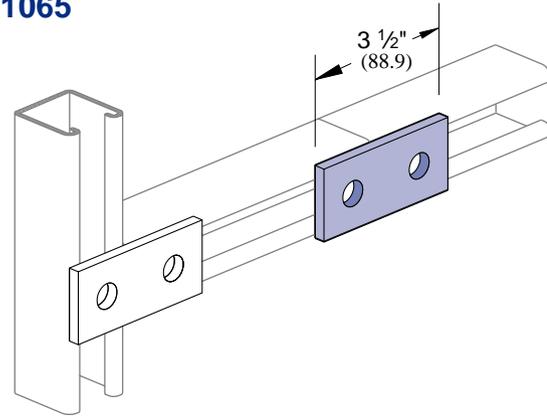
Part Number	U.S. Std. Thd Size	Weight/C	
		Lbs	kg
P1959	3/8"-16	21	9.5
P1960	1/2"-13	20	9.1
P1961	5/8"-11	19	8.6

**P2862  
P2863  
P2864**



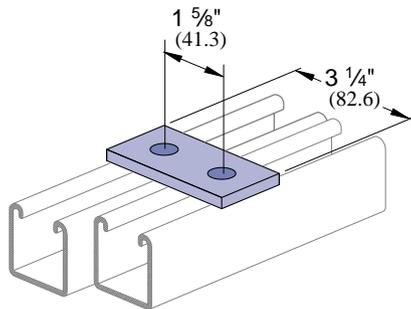
Part Number	Bolt Size	Hole Size	Weight/C	
			Lbs	kg
P2862	5/16"	1 1/32"	18	8.2
P2863	3/8"	7/16"	18	8.2
P2864	1/2"	9/16"	17	7.7

**P1065**



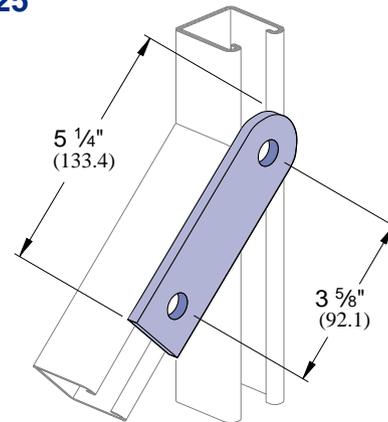
Wt/C 38 Lbs (17.2 kg)

**P1924**



Wt/C 35 Lbs (15.9 kg)

**P2325**



Wt/C 55 Lbs (24.9 kg)

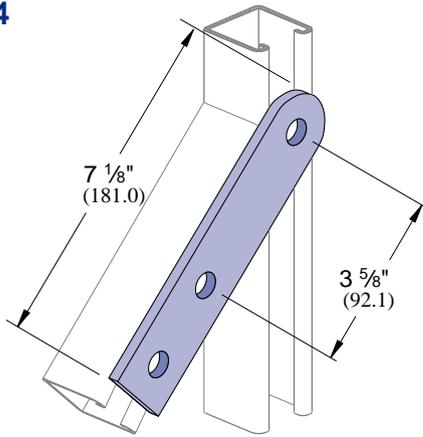
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	1 3/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# FLAT PLATE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

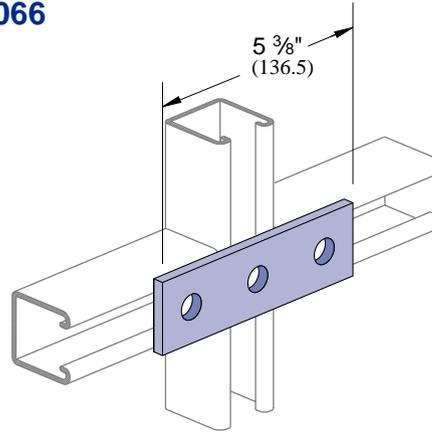


**P2324**



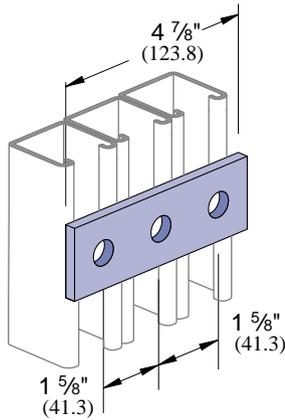
Wt/C 75 Lbs (34.0 kg)

**P1066**



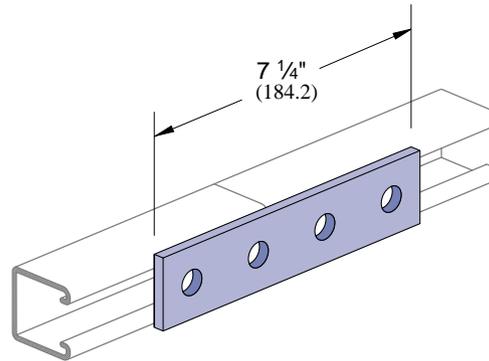
Wt/C 56 Lbs (25.4 kg)

**P1925**



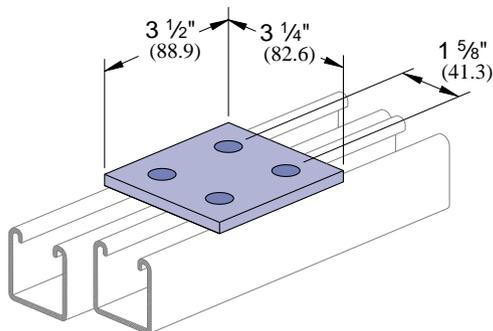
Wt/C 50 Lbs (22.7 kg)

**P1067**



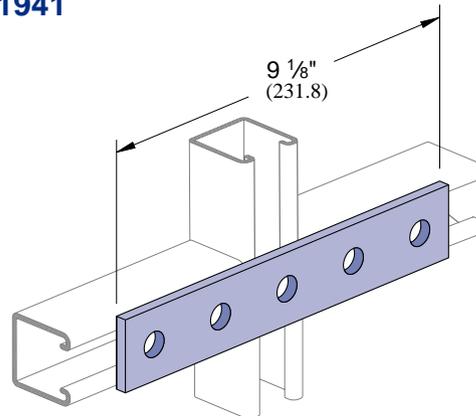
Wt/C 78 Lbs (35.4 kg)

**P2079**



Wt/C 73 Lbs (33.1 kg)

**P1941**



Wt/C 94 Lbs (42.6 kg)

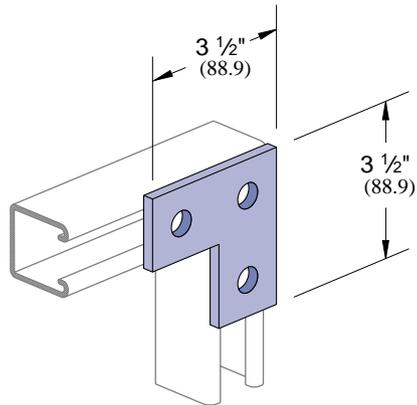
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	1 9/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# FLAT PLATE FITTINGS

FOR 1 $\frac{5}{8}$ " (41 MM) WIDTH SERIES CHANNEL

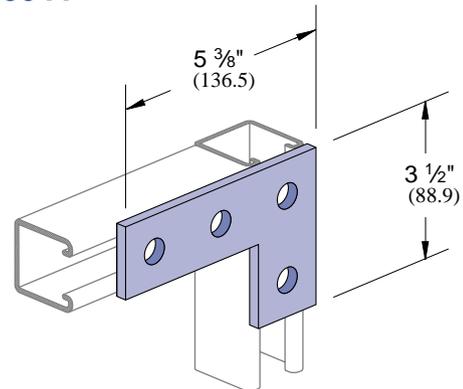


**P1036**



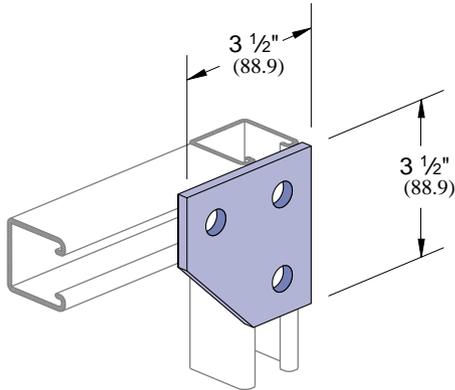
Wt/C 58 Lbs (26.3 kg)

**P1380 A**



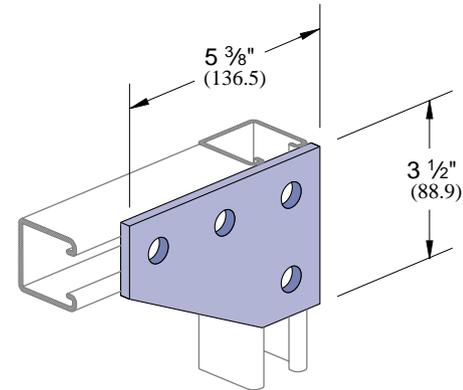
Wt/C 80 Lbs (36.3 kg)

**P1334**



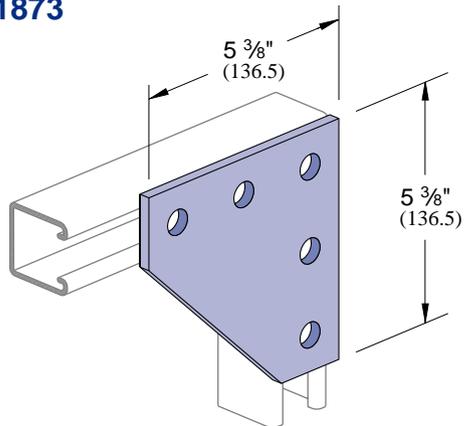
Wt/C 70 Lbs (31.8 kg)

**P1380**



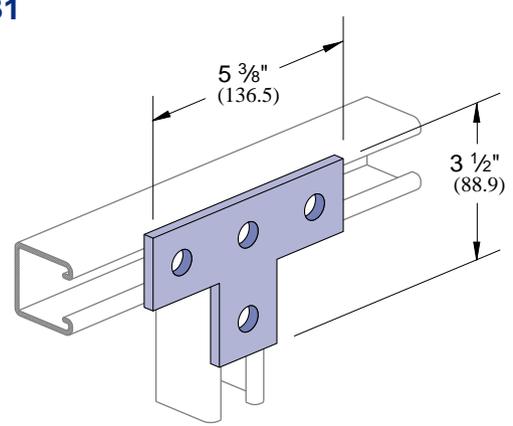
Wt/C 105 Lbs (47.6 kg)

**P1873**



Wt/C 150 Lbs (68.0 kg)

**P1031**



Wt/C 80 Lbs (36.3 kg)

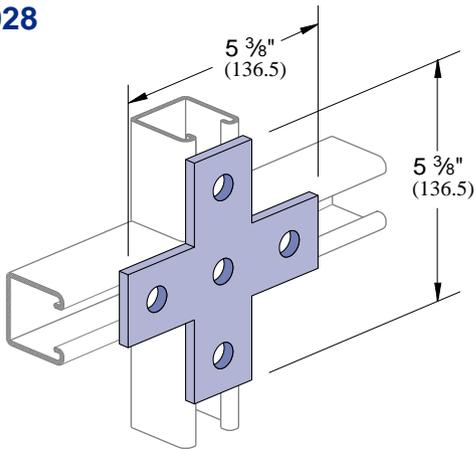
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 17/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# FLAT PLATE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

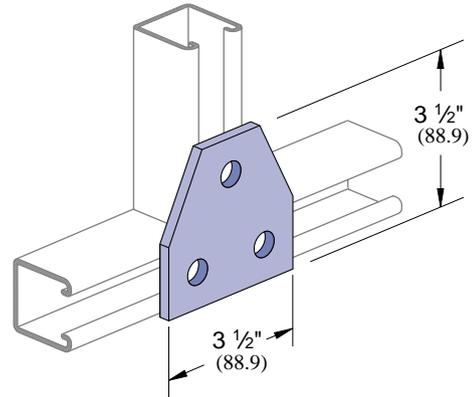


**P1028**



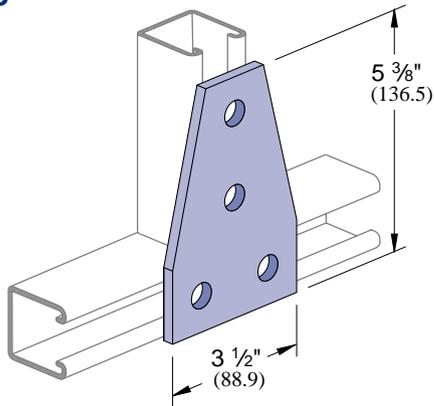
Wt/C 105 Lbs (47.6 kg)

**P1356**



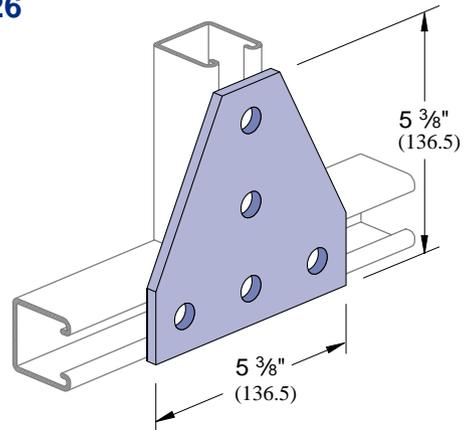
Wt/C 70 Lbs (31.8 kg)

**P1358**



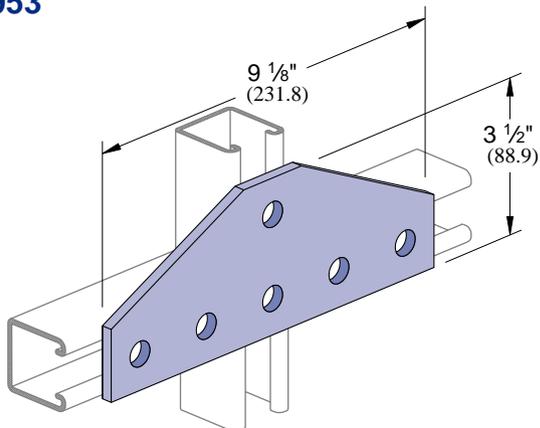
Wt/C 105 Lbs (47.6 kg)

**P1726**



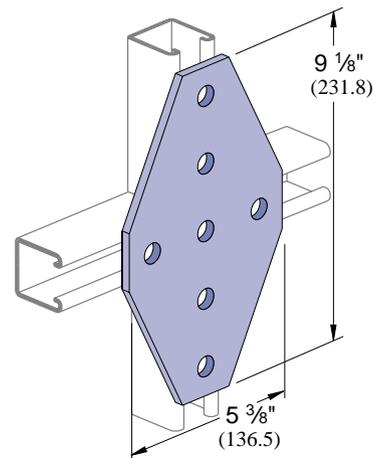
Wt/C 148 Lbs (67.1 kg)

**P1953**



Wt/C 176 Lbs (79.8 kg)

**P1950**



Wt/C 240 Lbs (108.9 kg)

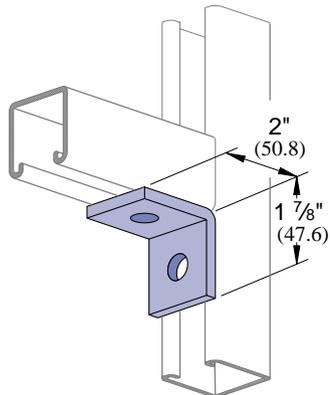
Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	1 3/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# NINETY DEGREE ANGLE FITTINGS

FOR 1 5/8" (41.3) WIDTH SERIES CHANNEL

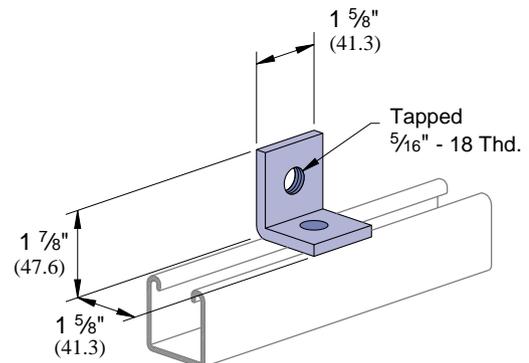


## P1026



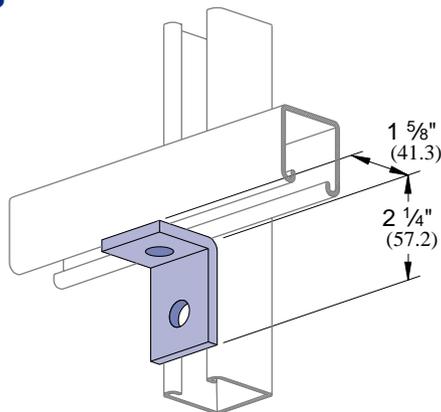
Wt/C 38 Lbs (17.2 kg)

## P1723



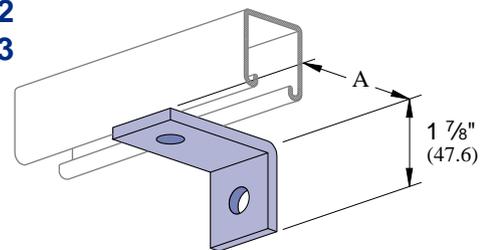
Wt/C 34 Lbs (15.4 kg)

## P1068



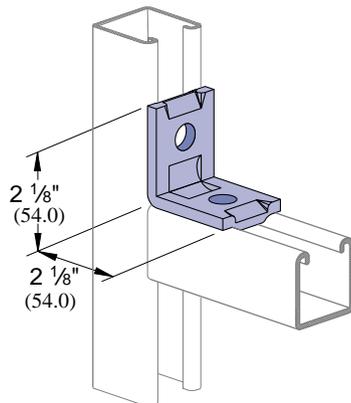
Wt/C 38 Lbs (17.2 kg)

## P1281 P1282 P1283



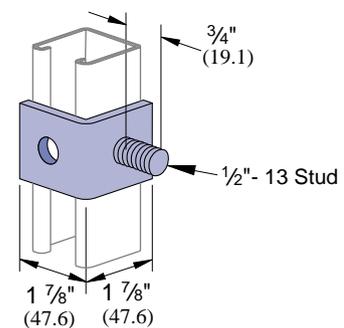
Part Number	"A" Dimension		Weight/C	
	In	mm	Lbs	kg
P1281	3	76.2	49	22.2
P1282	3 1/2	88.9	54	24.5
P1283	4	101.6	61	27.7

## P2626



Wt/C 40 Lbs (18.1 kg)

## P1315



Wt/C 45 Lbs (20.4 kg)

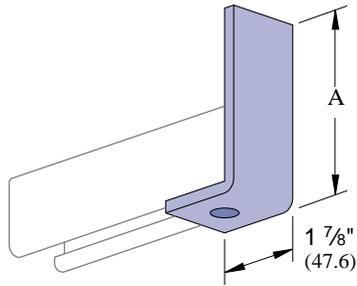
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# NINETY DEGREE ANGLE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

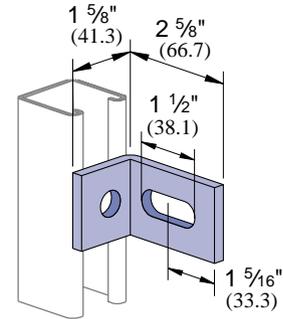


## P1538 A thru P1538 D



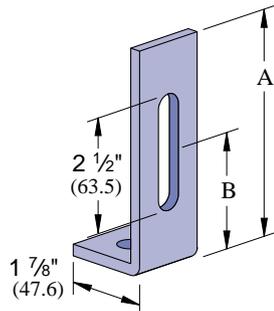
Part Number	"A" Dimension		Weight/C	
	In	mm	Lbs	kg
P1538 A	3 7/8	98.4	61	27.7
P1538 B	5 7/8	149.2	84	38.1
P1538 C	7 7/8	200.0	107	48.5
P1538 D	9 7/8	250.8	130	59.0

## P1750



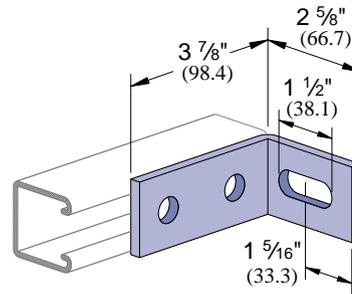
Wt/C 38 Lbs (17.2 kg)

## P1498 P1499



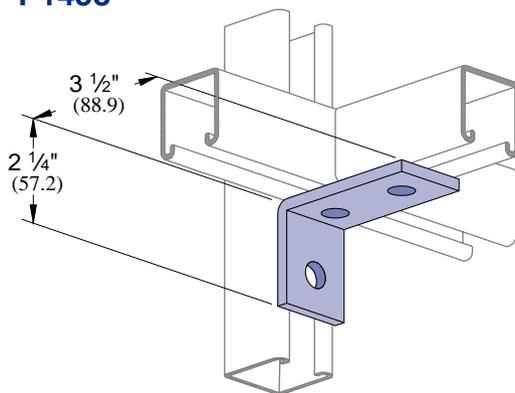
Part Number	"A"		"B"		Weight/C	
	In	mm	In	mm	Lbs	kg
P1498	4 7/8	123.8	2 1/2	63.5	65	29.5
P1499	6 7/8	174.6	4 1/2	114.3	85	38.6

## P1747



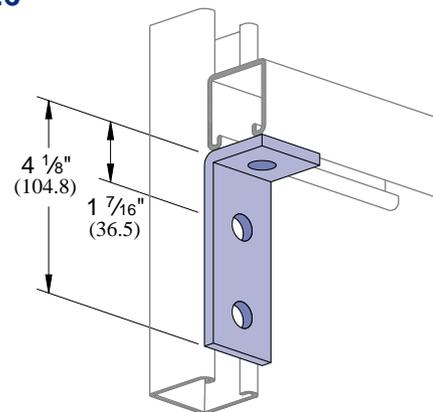
Wt/C 66 Lbs (29.9 kg)

## P1458



Wt/C 58 Lbs (26.3 kg)

## P1326



Wt/C 58 Lbs (26.3 kg)

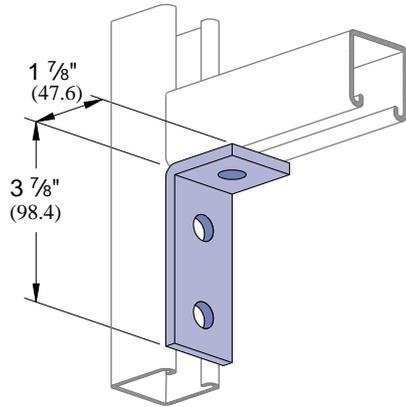
Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	1 9/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# NINETY DEGREE ANGLE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

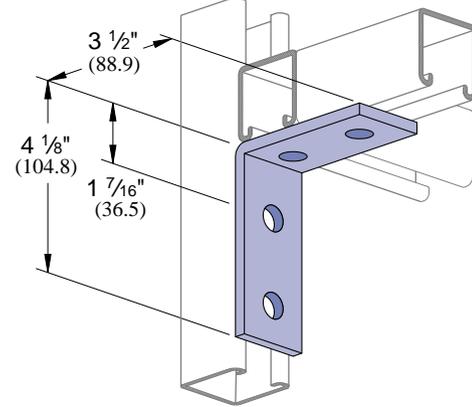


**P1346**



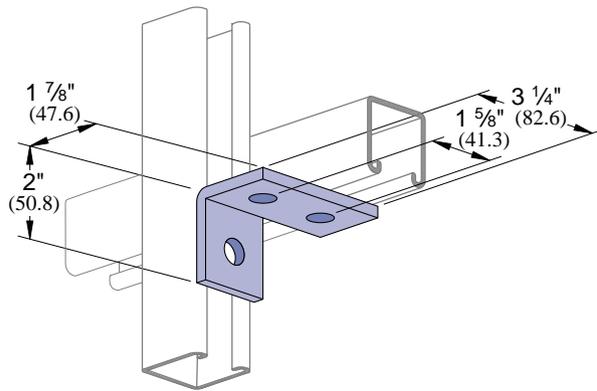
Wt/C 58 Lbs (26.3 kg)

**P1325**



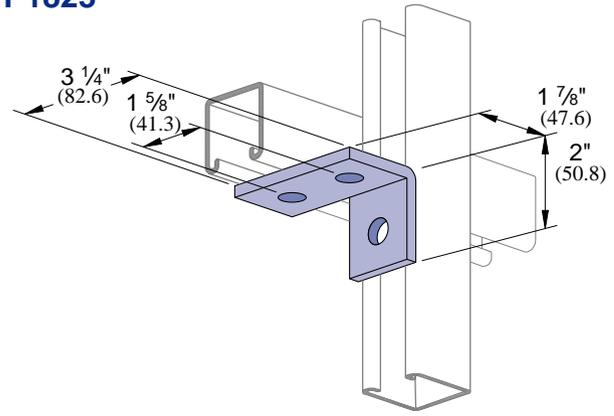
Wt/C 78 Lbs (35.4 kg)

**P1822**



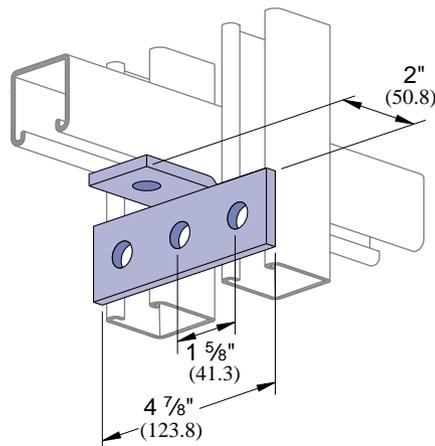
Wt/C 55 Lbs (24.9 kg)

**P1823**



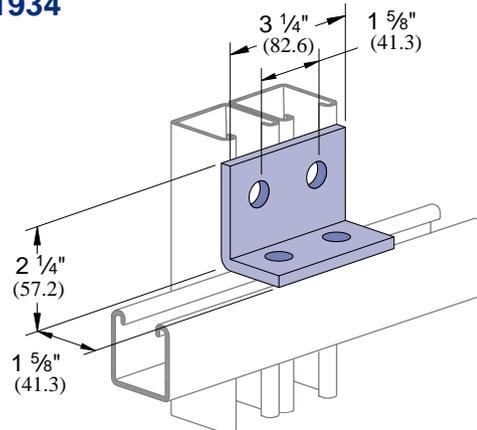
Wt/C 55 Lbs (24.9 kg)

**P1821**



Wt/C 71 Lbs (32.2 kg)

**P1934**



Wt/C 75 Lbs (34.0 kg)

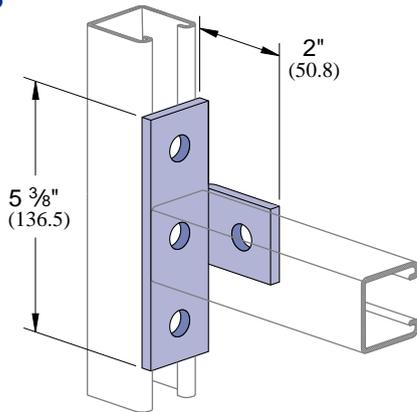
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# NINETY DEGREE ANGLE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

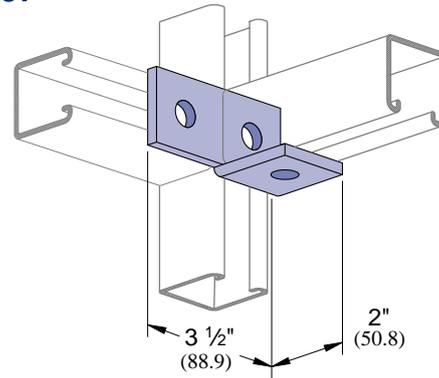


**P1033**



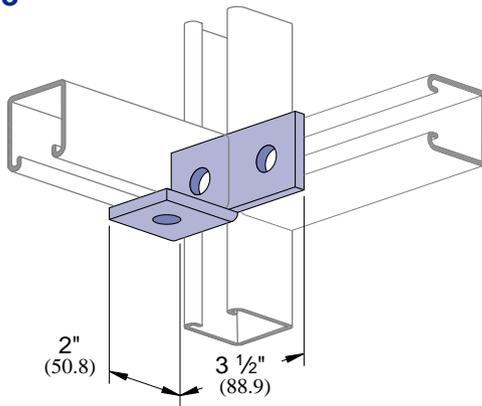
Wt/C 80 Lbs (36.3 kg)

**P1037**



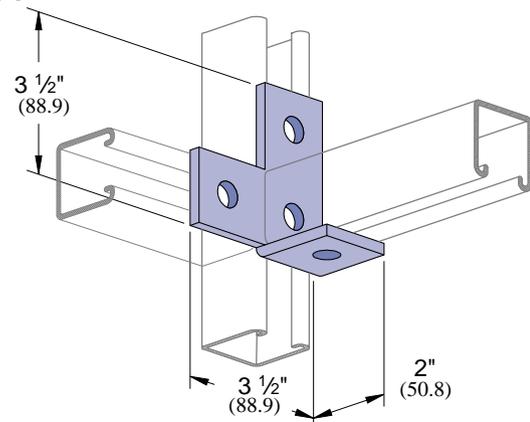
Wt/C 58 Lbs (26.3 kg)

**P1038**



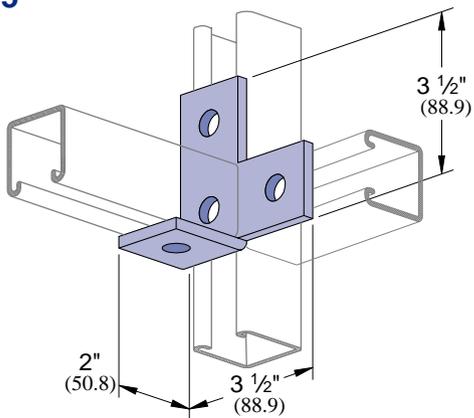
Wt/C 58 Lbs (26.3 kg)

**P1034**



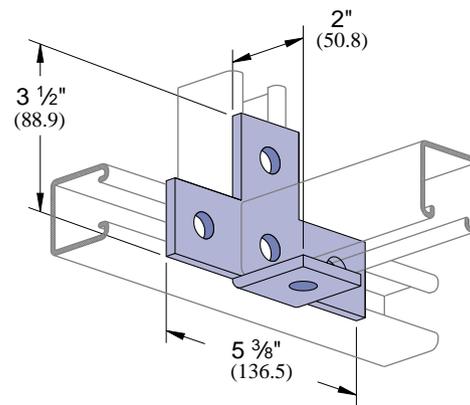
Wt/C 80 Lbs (36.3 kg)

**P1035**



Wt/C 80 Lbs (36.3 kg)

**P1029**



Wt/C 105 Lbs (47.6 kg)

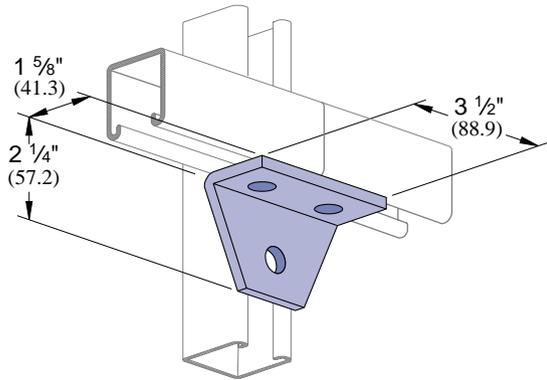
Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	1 9/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# NINETY DEGREE ANGLE FITTINGS

FOR 1 5/8" (41.3) WIDTH SERIES CHANNEL

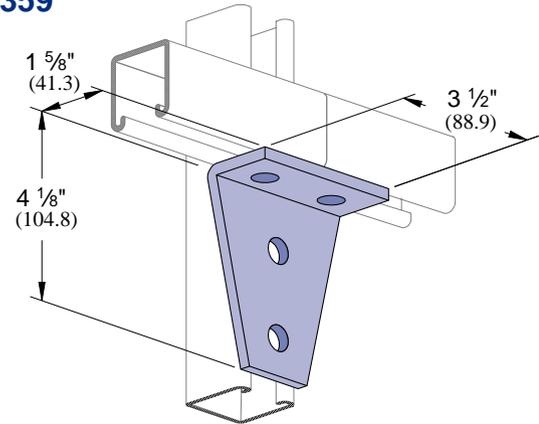


**P1357**



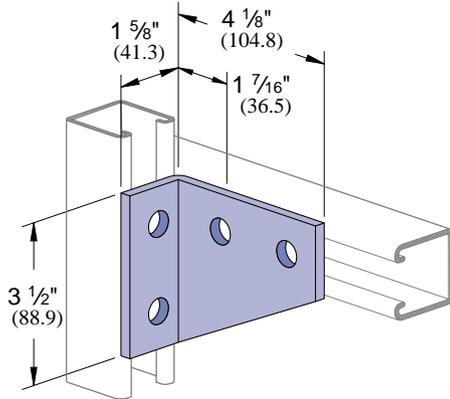
Wt/C 70 Lbs (31.8 kg)

**P1359**



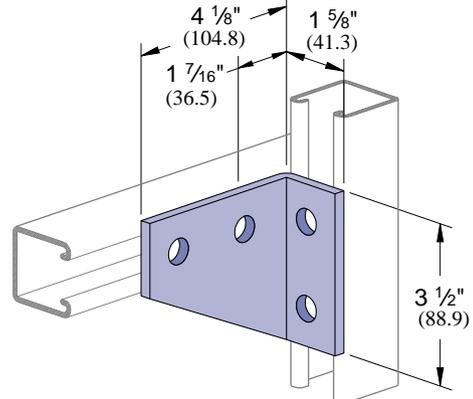
Wt/C 105 Lbs (47.6 kg)

**P1381**



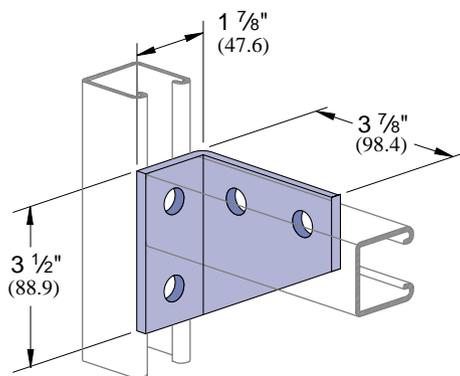
Wt/C 105 Lbs (47.6 kg)

**P1382**



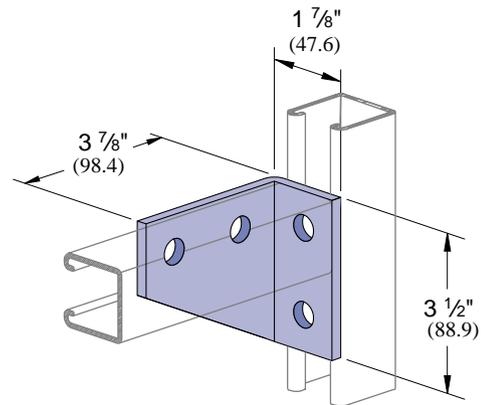
Wt/C 105 Lbs (47.6 kg)

**P1290**



Wt/C 101 Lbs (45.8 kg)

**P1291**



Wt/C 101 Lbs (45.8 kg)

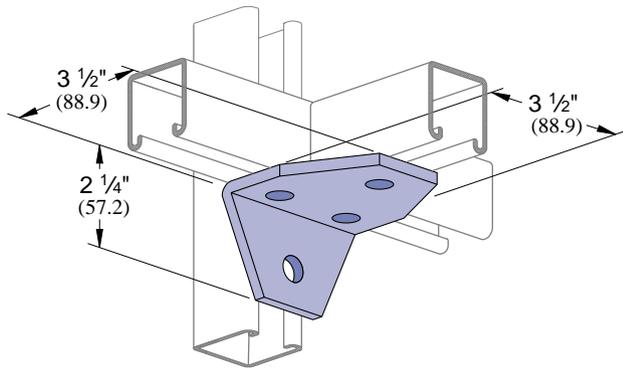
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# NINETY DEGREE ANGLE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

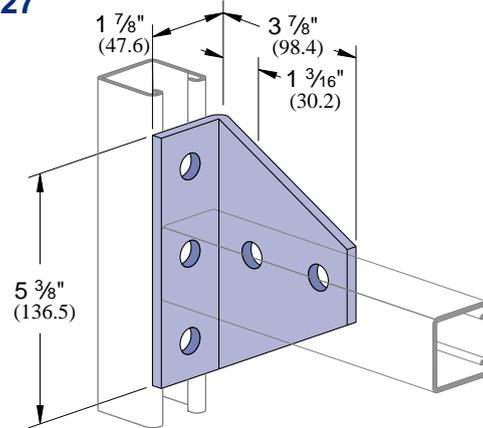


**P1579**



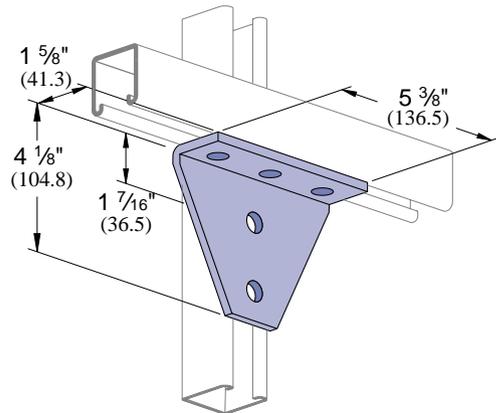
Wt/C 103 Lbs (46.7 kg)

**P1727**



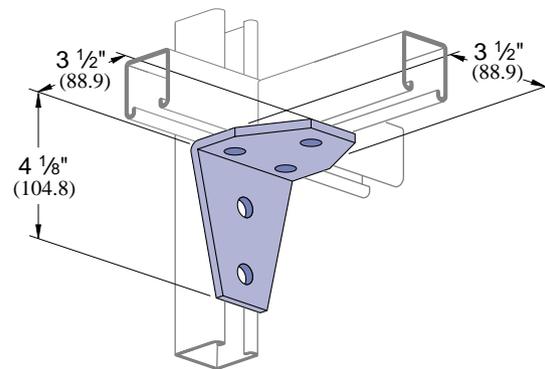
Wt/C 154 Lbs (69.9 kg)

**P1728**



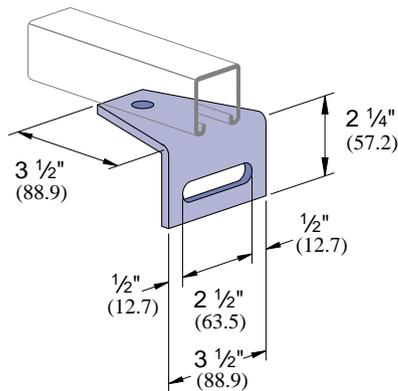
Wt/C 154 Lbs (69.9 kg)

**P2235**



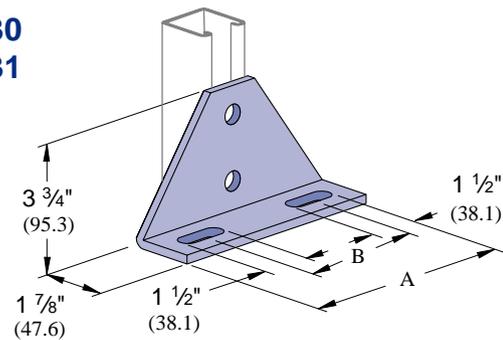
Wt/C 135 Lbs (61.2 kg)

**P1713**



Wt/C 97 Lbs (44.0 kg)

**P1130  
P1131**



Part Number	"A"		"B"		Weight/C	
	In	mm	In	mm	Lbs	kg
P1130	6 5/8	168.3	4	101.6	190	86.2
P1131	8 7/8	219.1	6	152.4	242	109.8

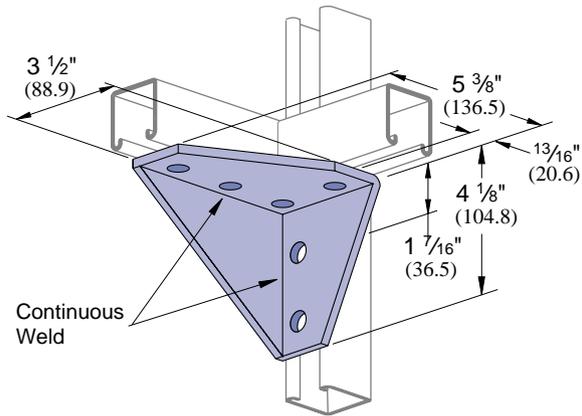
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	1 9/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# NINETY DEGREE ANGLE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

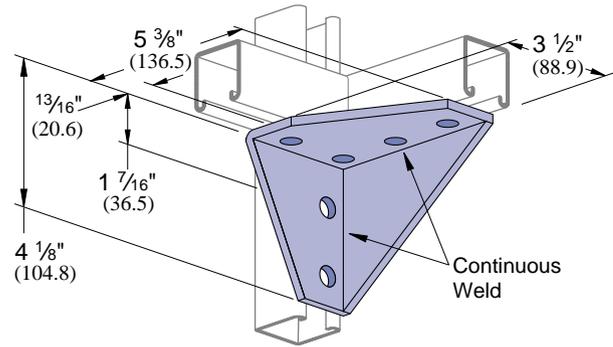


## P1956



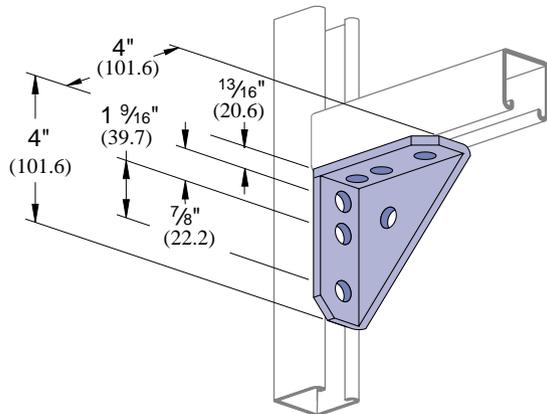
Wt/C 230 Lbs (104.3 kg)

## P1957



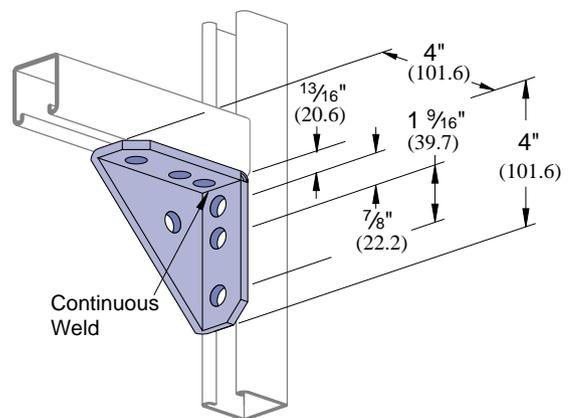
Wt/C 230 Lbs (104.3 kg)

## P2484



Wt/C 134 Lbs (60.8 kg)

## P2484 W



Wt/C 134 Lbs (60.8 kg)

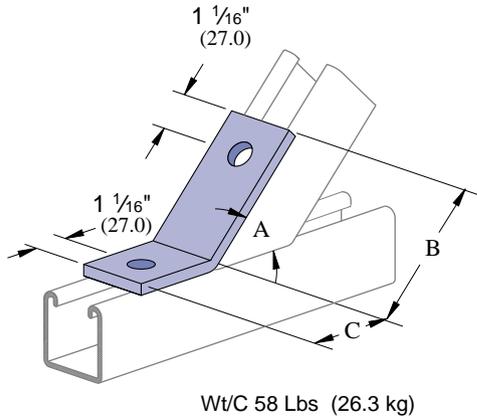
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# ANGULAR FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

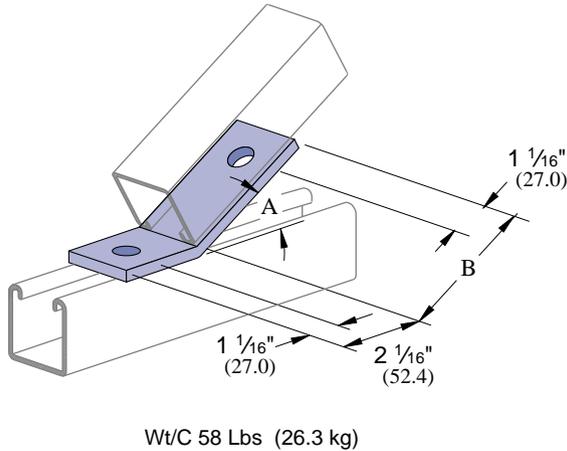


## P1546, P2094 thru P2100



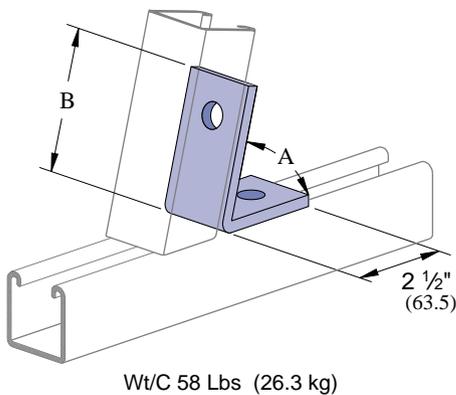
Part Number	"A"		"B"		"C"	
	Degree	rad	In	mm	In	mm
P2094	82 1/2°	.46π	3 3/16	90.5	1 11/16	42.9
P2095	75°	.42π	3 3/16	90.5	1 11/16	42.9
P2096	67 1/2°	.38π	3 1/2	88.9	1 3/4	44.5
P2097	60°	.33π	3 3/8	85.7	1 7/8	47.6
P2098	52 1/2°	.29π	3 1/4	82.6	2 1/16	52.4
P1546	45°	.25π	3	76.2	2 5/16	58.7
P2099	37 1/2°	.21π	3 1/2	88.9	1 13/16	46.0
P2100	37 1/2°	.21π	2 1/16	68.3	2 5/8	66.7

## P2101 thru P2104



Part Number	"A"		"B"	
	Degree	rad	In	mm
P2101	30°	.17π	3 1/4	82.6
P2102	22 1/2°	.13π	3 5/16	84.1
P2103	15°	.08π	3 5/16	84.1
P2104	7 1/2°	.04π	3 5/16	84.1

## P1186, P2105 thru P2110



Part Number	"A"		"B"	
	Degree	rad	In	mm
P2105	82 1/2°	.46π	3 3/16	81.0
P2106	75°	.42π	3 3/16	81.0
P2107	67 1/2°	.38π	3 3/8	79.4
P2108	60°	.33π	3 1/8	79.4
P2109	52 1/2°	.29π	3 1/16	77.8
P1186	45°	.25π	3 3/8	79.4
P2110	37 1/2°	.21π	3	76.2

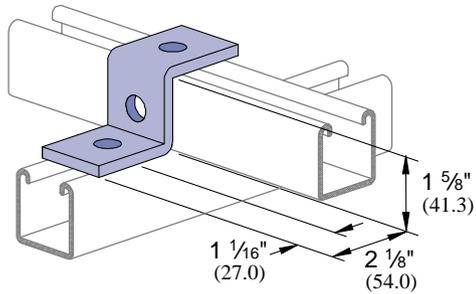
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	1 3/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# "Z" SHAPE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

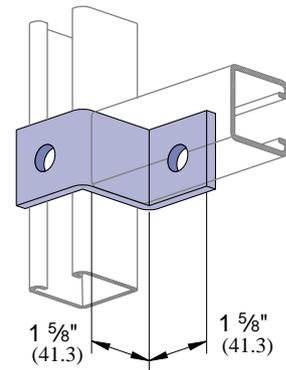


## P1045



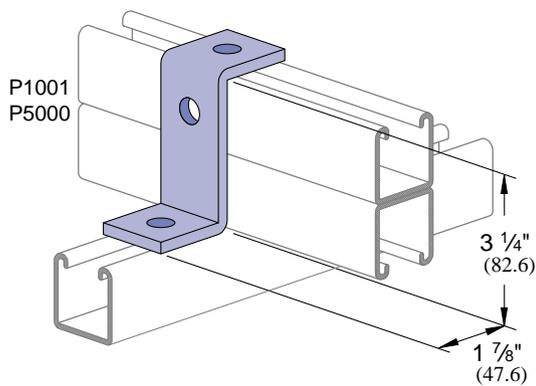
Wt/C 55 Lbs (24.9 kg)

## P1347



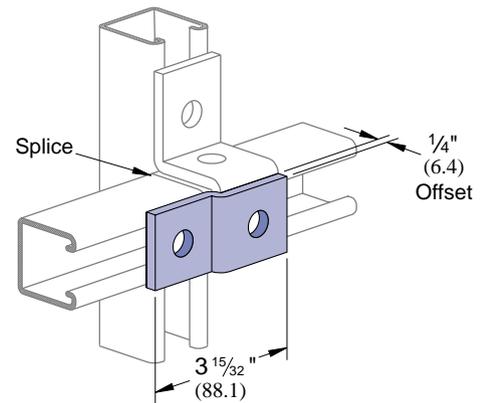
Wt/C 55 Lbs (24.9 kg)

## P1453



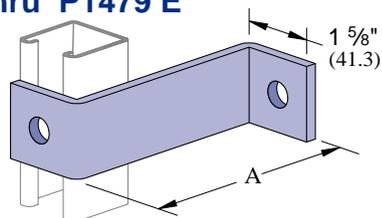
Wt/C 70 Lbs (31.8 kg)

## P1454



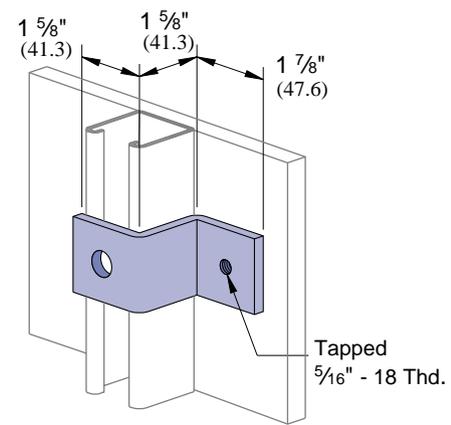
Wt/C 38 Lbs (17.2 kg)

## P1479 A thru P1479 E



Part Number	"A" Dimension		Weight/C	
	In	mm	Lbs	kg
P1479 A	4	101.6	81	36.7
P1479 B	5	127.0	92	41.7
P1479 C	6	152.4	104	47.2
P1479 D	7	177.8	115	52.2
P1479 E	8	203.2	127	57.6

## P1730



Wt/C 54 Lbs (24.5 kg)

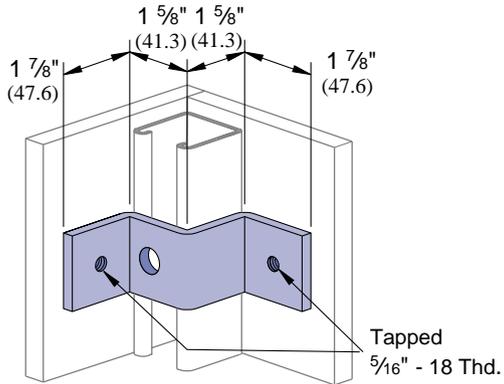
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# "Z" SHAPE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

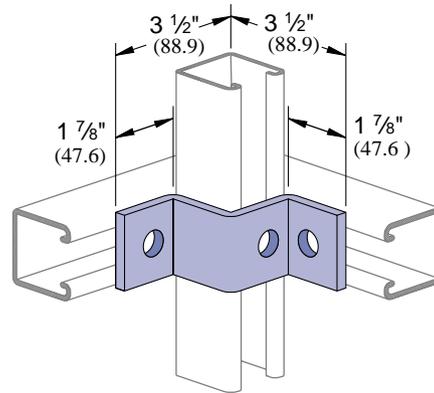


## P1734



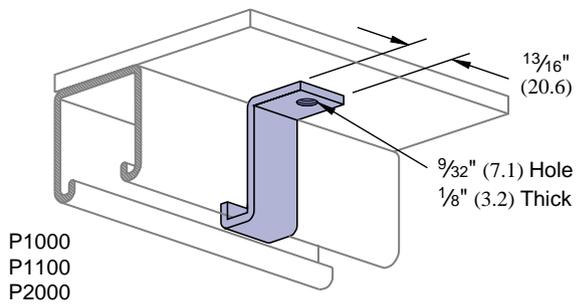
Wt/C 70 Lbs (31.8 kg)

## P1736



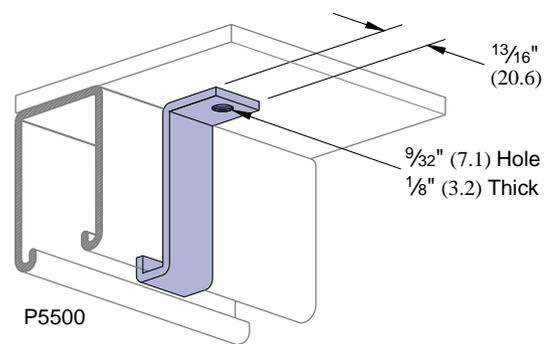
Wt/C 70 Lbs (31.8 Kg)

## P2360



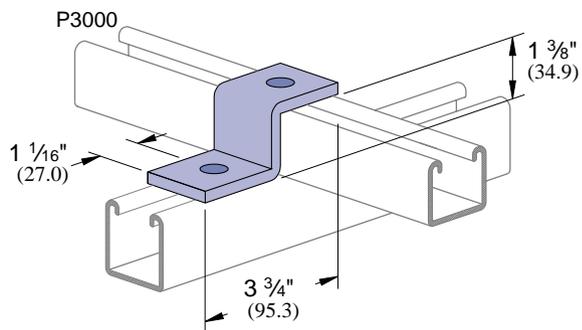
Wt/C 9 Lbs (4.1 kg)

## P5560



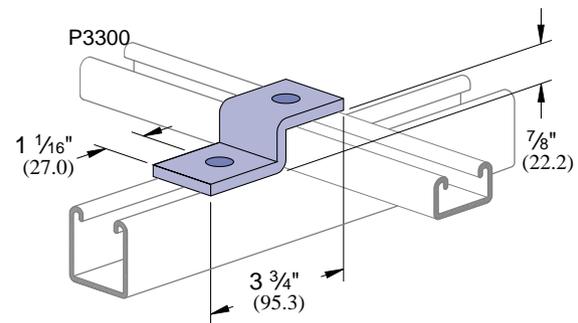
Wt/C 11 Lbs (5.0 kg)

## P3045



Wt/C 53 Lbs (24.0 kg)

## P3345



Wt/C 47 Lbs (21.3 kg)

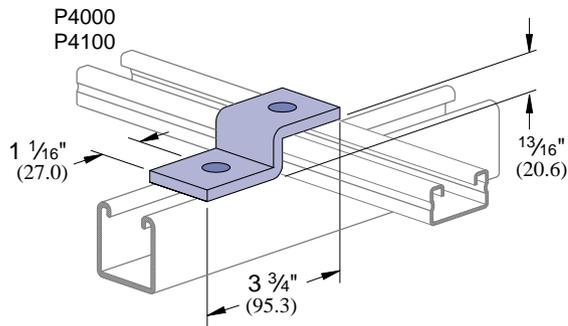
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	1 5/8" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# "Z" & "U" SHAPE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

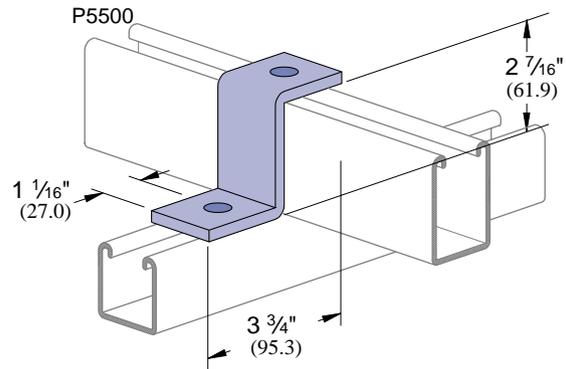


## P4045



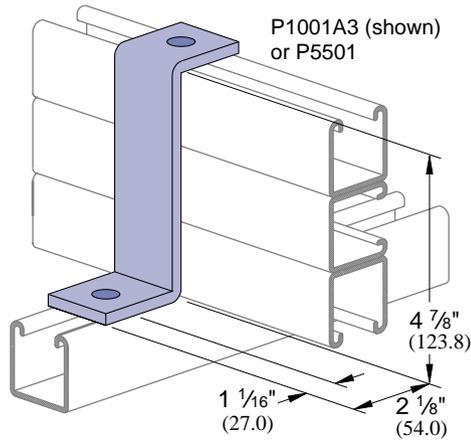
Wt/C 47 Lbs (21.3 kg)

## P5545



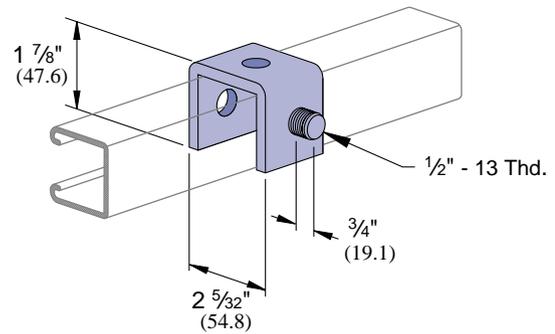
Wt/C 67 Lbs (30.4 kg)

## P2469



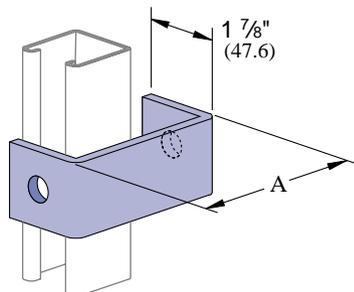
Wt/C 93 Lbs (42.2 kg)

## P1320



Wt/C 63 Lbs (28.6 kg)

## P1363 A thru P1363 E



Part Number	"A" Dimension		Weight/C	
	In	mm	Lbs	kg
P1363 A	4	101.6	78	35.4
P1363 B	5	127.0	89	40.4
P1363 C	6	152.4	101	45.8
P1363 D	7	177.8	112	50.8
P1363 E	8	203.2	124	56.2

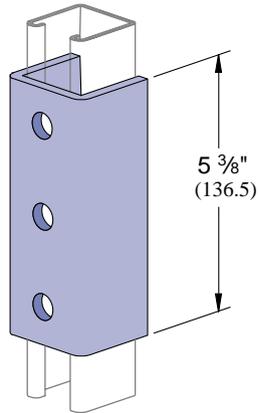
Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# "U" SHAPE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

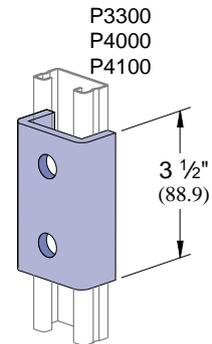


**P1376**



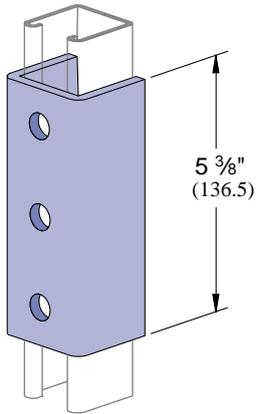
Wt/C 128 Lbs (58.1 kg)

**P4376**



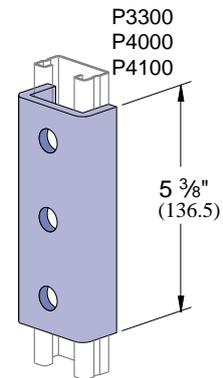
Wt/C 85 Lbs (38.6 kg)

**P1376 A**



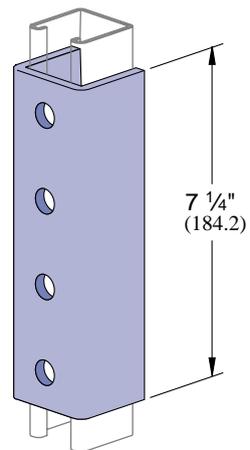
Wt/C 197 Lbs (89.4 kg)

**P4376 A**



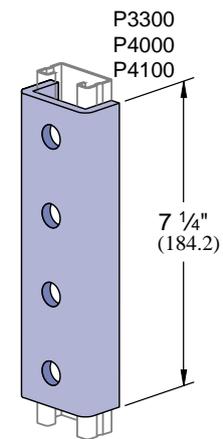
Wt/C 130 Lbs (59.0 kg)

**P1377**



Wt/C 265 Lbs (120.2 kg)

**P4377**



Wt/C 176 Lbs (79.8 kg)

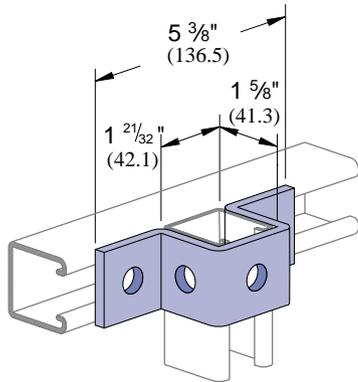
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	1 9/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# "U" SHAPE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

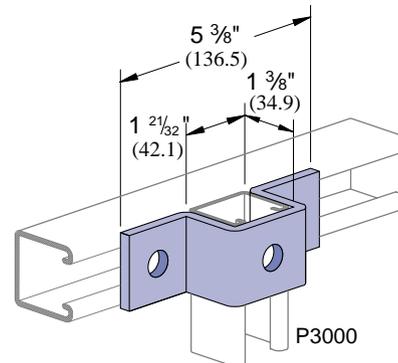


**P1047**



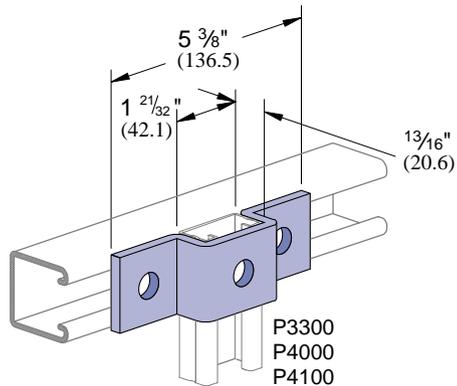
Wt/C 88 Lbs (39.9 kg)

**P3047**



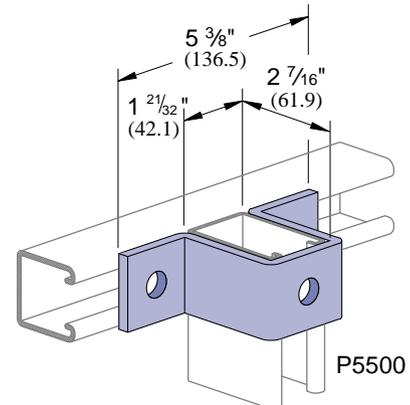
Wt/C 84 Lbs (38.1 kg)

**P4047**



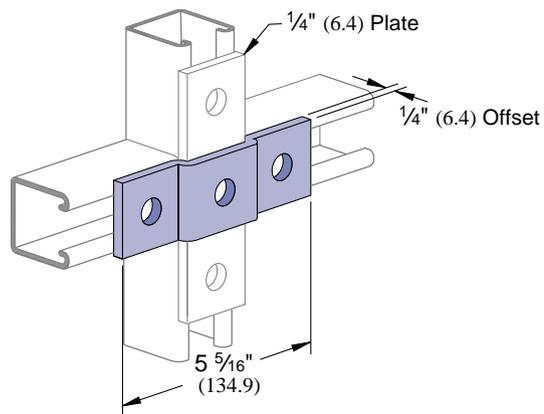
Wt/C 71 Lbs (32.2 kg)

**P5547**



Wt/C 108 Lbs (49.0 kg)

**P1455**



Wt/C 58 Lbs (26.3 kg)

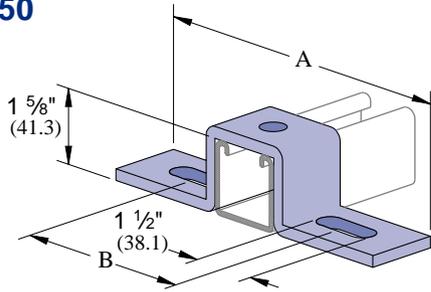
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# "U" SHAPE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

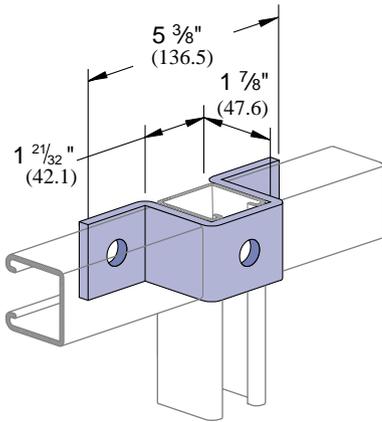


**P1048**  
**P1049**  
**P1050**



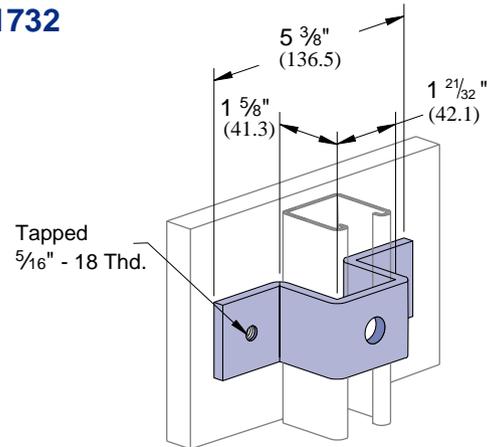
Part Number	"A"		"B"		Weight/C	
	In	mm	In	mm	Lbs	kg
<b>P1048</b>	7 1/4	184.2	4 1/8	104.8	105	47.6
<b>P1049</b>	8 1/2	215.9	5 3/8	136.5	120	54.4
<b>P1050</b>	10 3/8	263.5	7 1/4	184.2	130	59.0

**P1383**



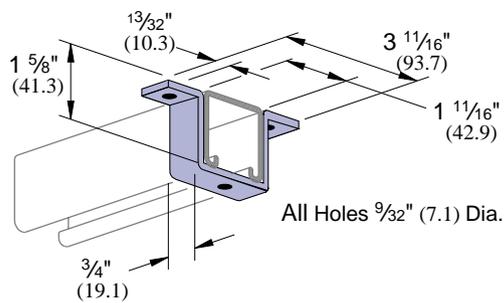
Wt/C 95 Lbs (43.1 kg)

**P1732**



Wt/C 88 Lbs (39.9 kg)

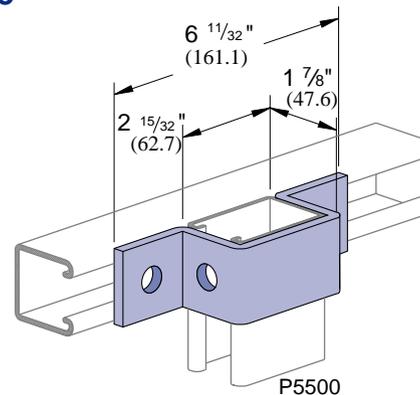
**P2237**



Material : 1/8" (3.2) thick.

Wt/C 18 Lbs (8.2 kg)

**P5543**



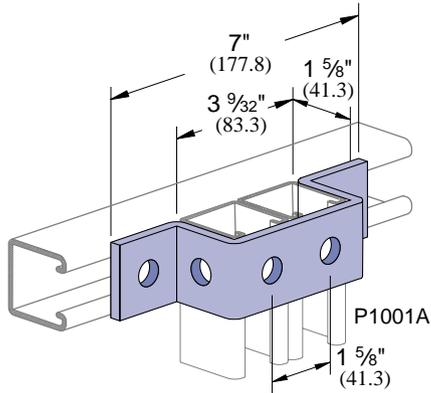
Wt/C 97 Lbs (44.0 kg)

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	1 3/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# "U" SHAPE FITTINGS FOR 1 5/8" (41.3) WIDTH SERIES CHANNEL

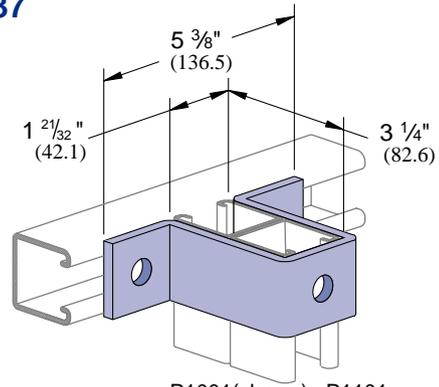


## P1043 A



Wt/C 105 Lbs (47.6 kg)

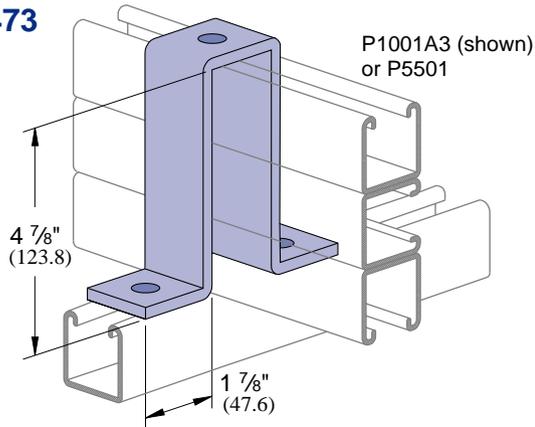
## P1737



P1001 (shown), P1101,  
P2001, P4004 or P5000

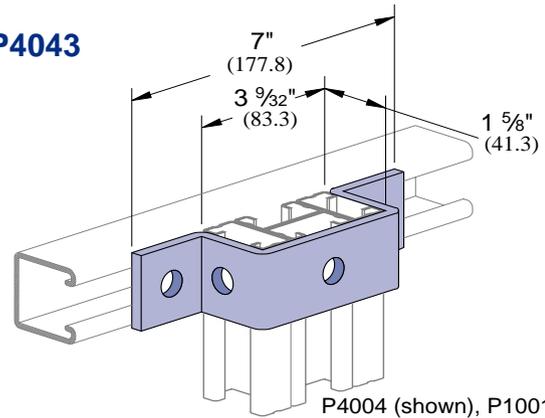
Wt/C 128 Lbs (58.1 kg)

## P2473



Wt/C 197 Lbs (89.4 kg)

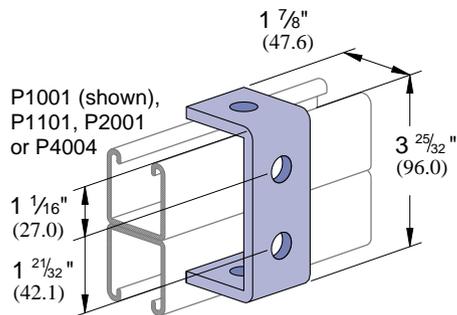
## P4043



P4004 (shown), P1001,  
P1101, P2001, or P5000

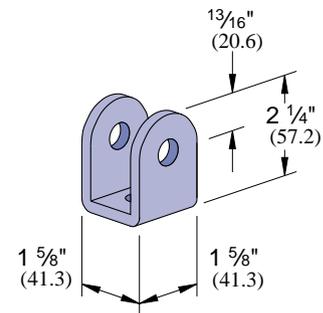
Wt/C 106 Lbs (48.1 kg)

## P1044



Wt/C 70 Lbs (31.8 kg)

## P1973



Wt/C 53 Lbs (24.0 kg)

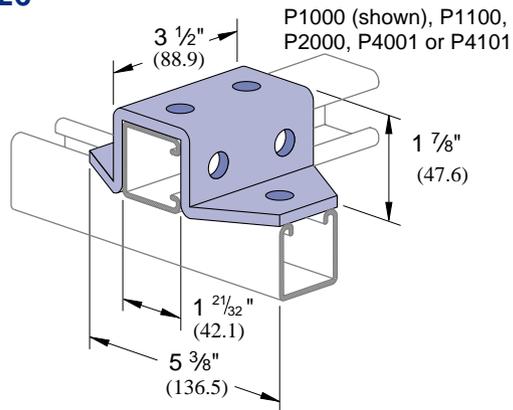
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# "U" AND WING SHAPE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

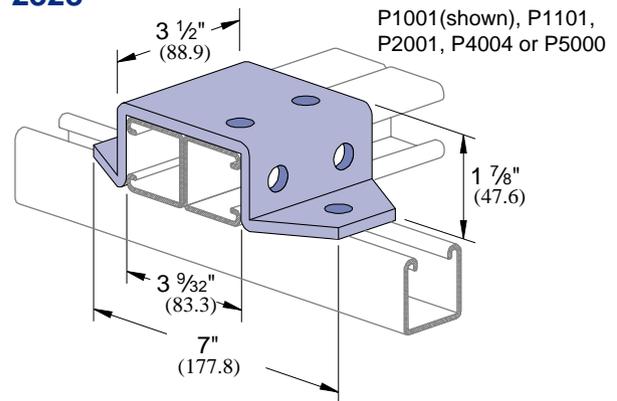


## P2326



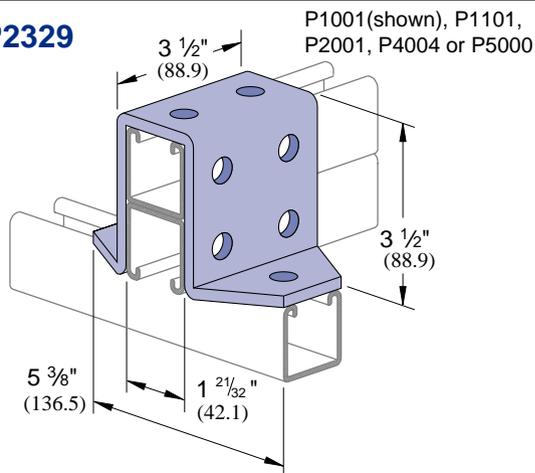
Wt/C 171 Lbs (77.6 kg)

## P2328



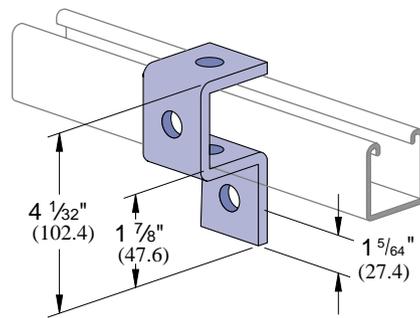
Wt/C 209 Lbs (94.8 kg)

## P2329



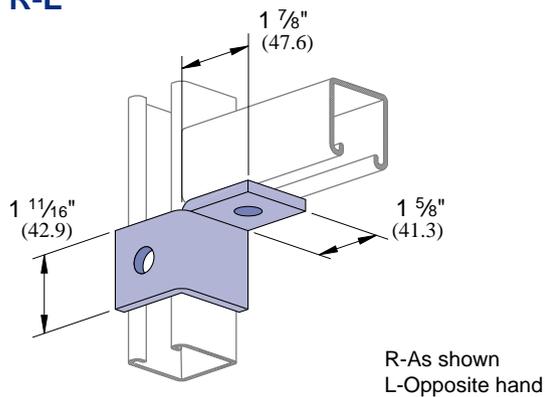
Wt/C 257 Lbs (116.6 kg)

## P1046 A



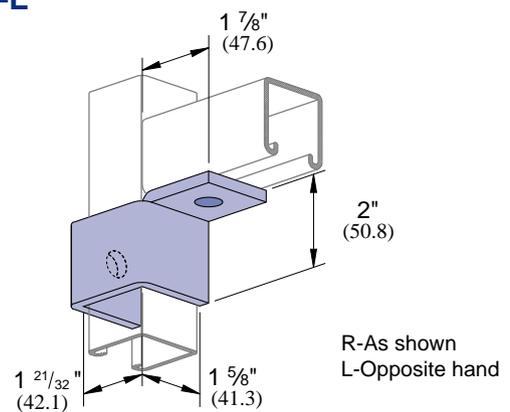
Wt/C 76 Lbs (34.5 kg)

## P2341 R-L



Wt/C 60 Lbs (27.2 kg)

## P2472 R-L



Wt/C 75 Lbs (34.0 kg)

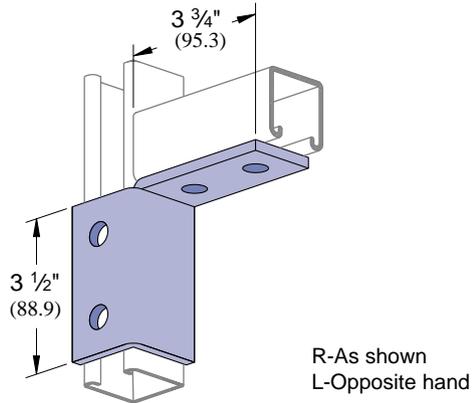
Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	1 9/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# WING SHAPE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

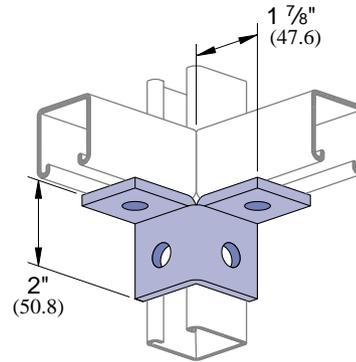


**P2343 R-L**



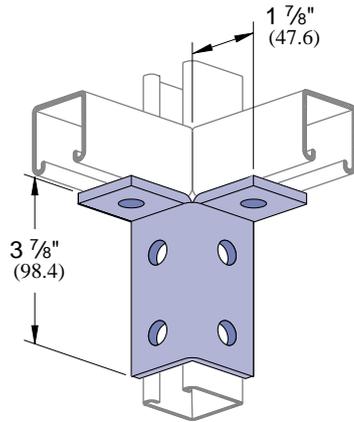
Wt/C 119 Lbs (54.0 kg)

**P2223**



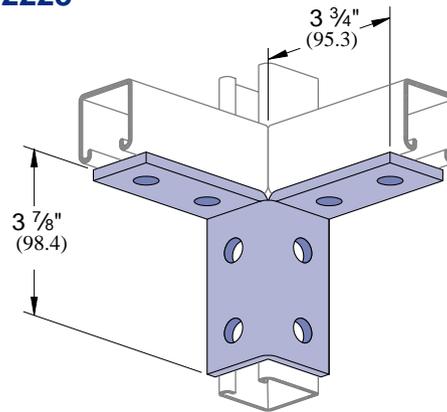
Wt/C 76 Lbs (34.5 kg)

**P2224**



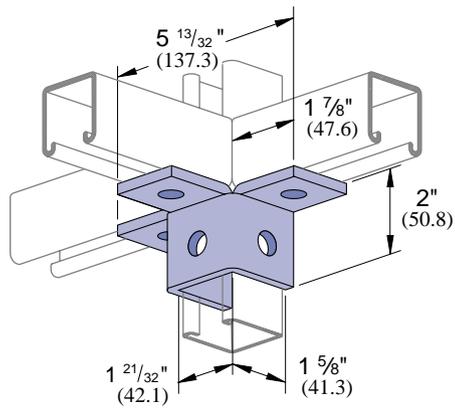
Wt/C 115 Lbs (52.2 kg)

**P2225**



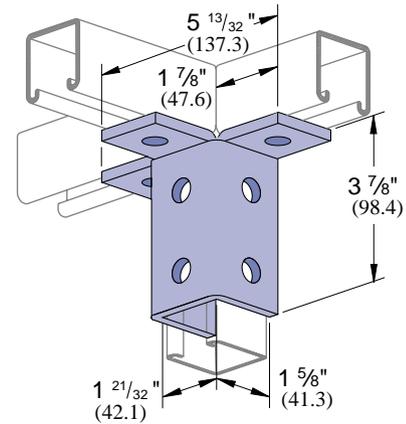
Wt/C 155 Lbs (70.3 kg)

**P2227**



Wt/C 113 Lbs (51.3 kg)

**P2228**



Wt/C 177 Lbs (80.3 kg)

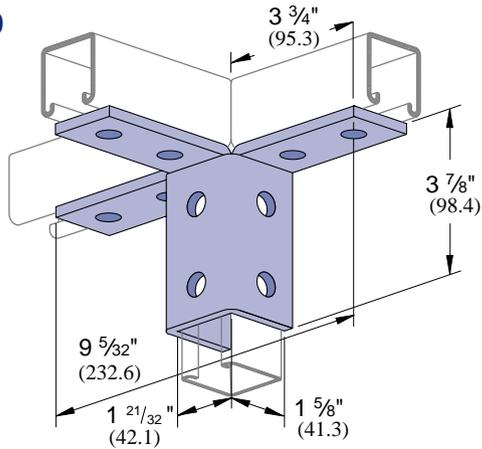
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	1 3/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# WING SHAPE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

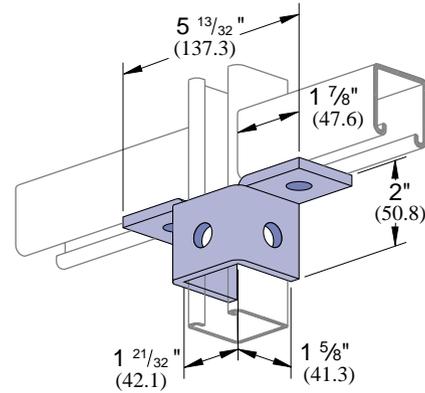


**P2229**



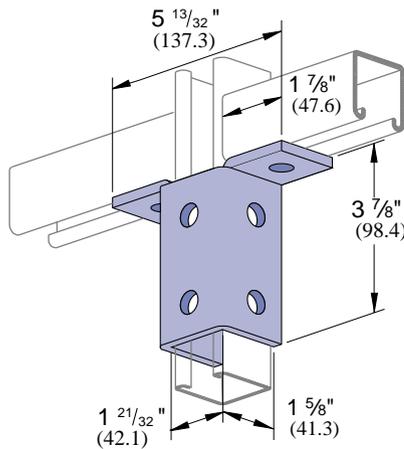
Wt/C 230 Lbs (104.3 kg)

**P2345**



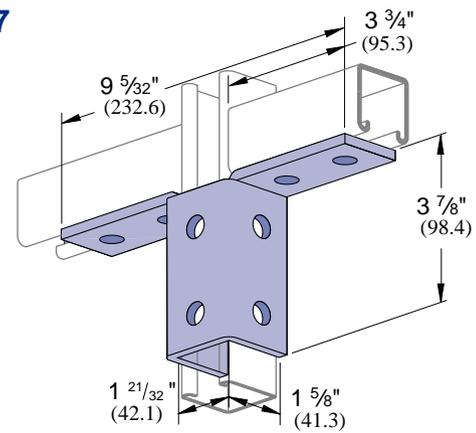
Wt/C 93 Lbs (42.2 kg)

**P2346**



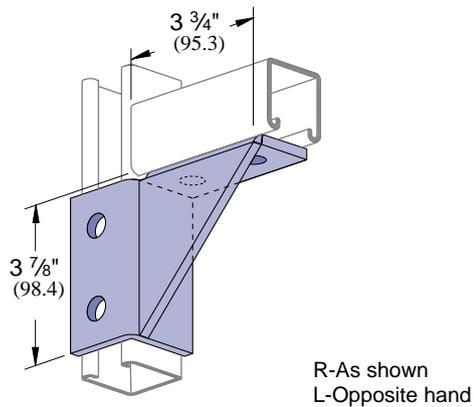
Wt/C 150 Lbs (68.0 kg)

**P2347**



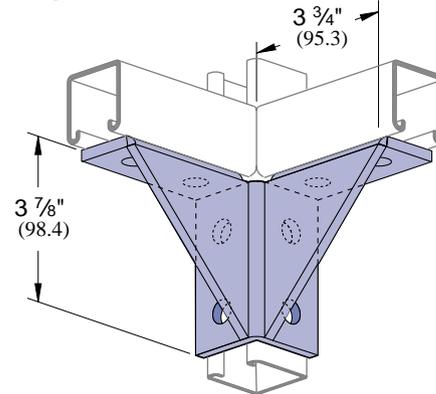
Wt/C 193 Lbs (87.5 kg)

**P2344 R-L**



Wt/C 176 Lbs (79.8 kg)

**P2226**



Wt/C 217 Lbs (98.4 kg)

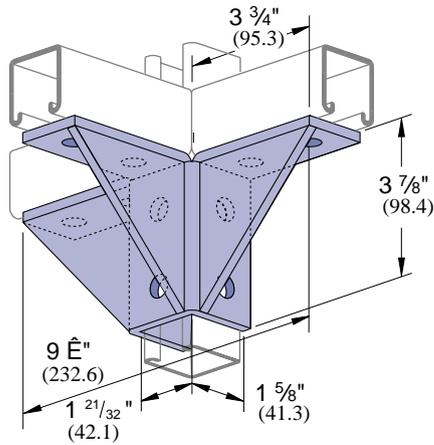
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	1 9/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# WING SHAPE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

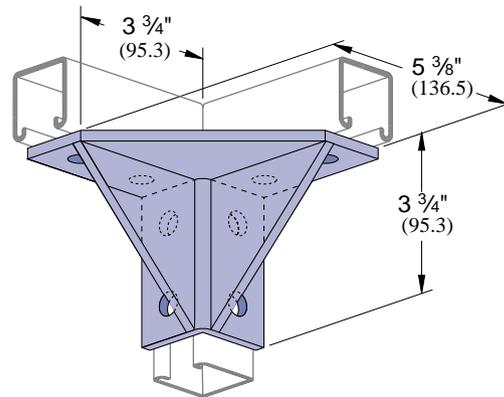


## P2230



Wt/C 310 Lbs (140.6 kg)

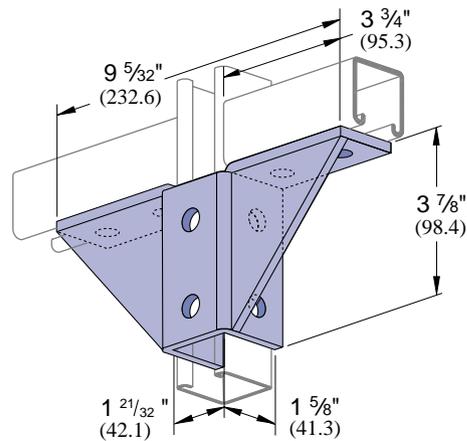
## P2245



Fitting notched for continuous vertical.

Wt/C 315 Lbs (142.9 kg)

## P2348



Wt/C 274 Lbs (124.3 kg)

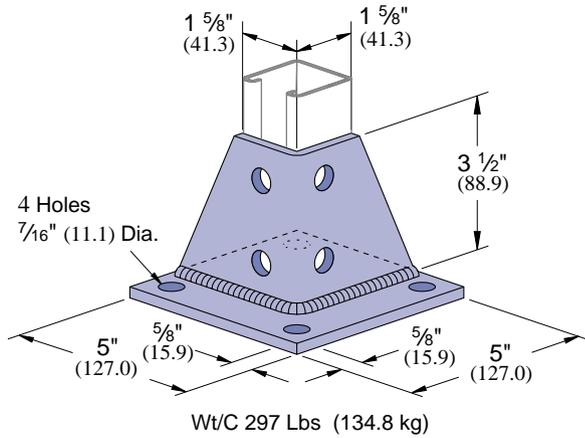
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# POST BASES

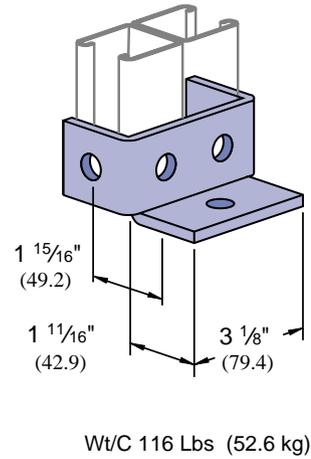
FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



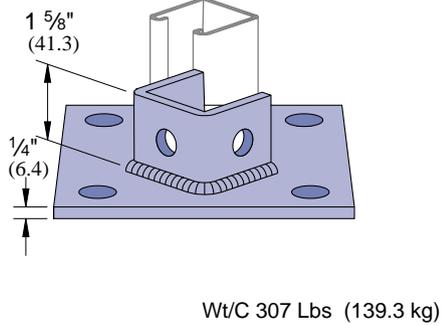
**P1887**



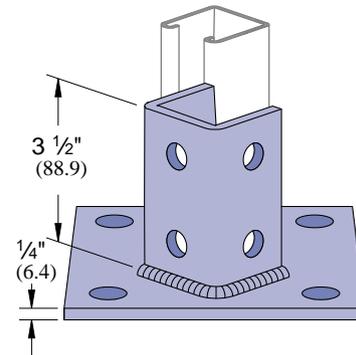
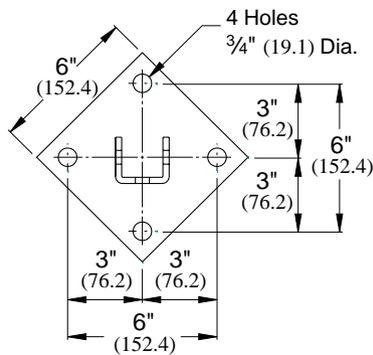
**P2453**



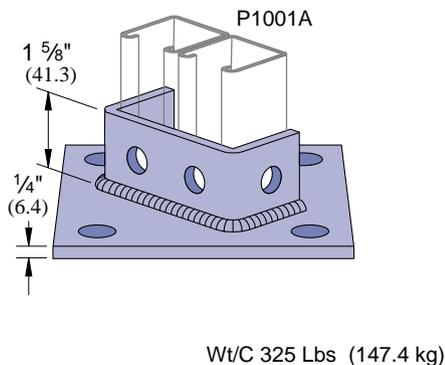
**P2072**



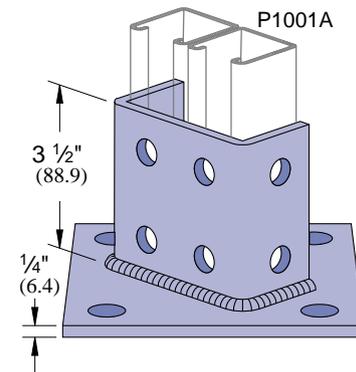
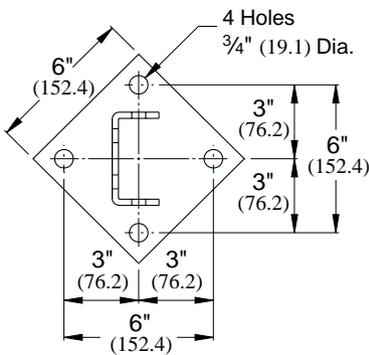
**P2072 A**



**P2073**



**P2073 A**



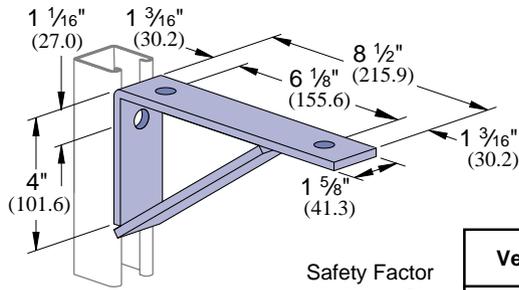
Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	1 3/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# BRACKETS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P1769

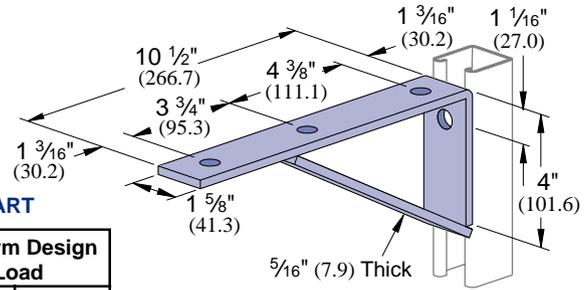


Safety Factor  
2 1/2

Material: 1/4" (6.4) thick steel.

Wt/C 174 Lbs (78.9 kg)

## P1771



5/16" (7.9) Thick

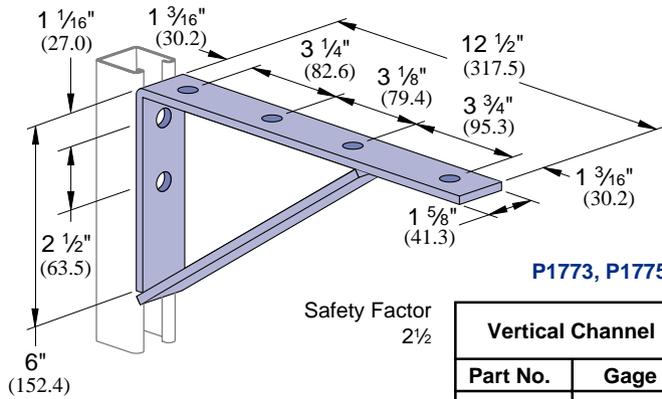
Material: 1/4" (6.4) thick steel.

Wt/C 206 Lbs (93.4 kg)

P1769, P1771 LOAD CHART

Vertical Channel		Uniform Design Load	
Part No.	Gage	Lbs	kN
P1000	12	800	3.6
P1100	14	600	2.7
P2000	16	400	1.8

## P1773

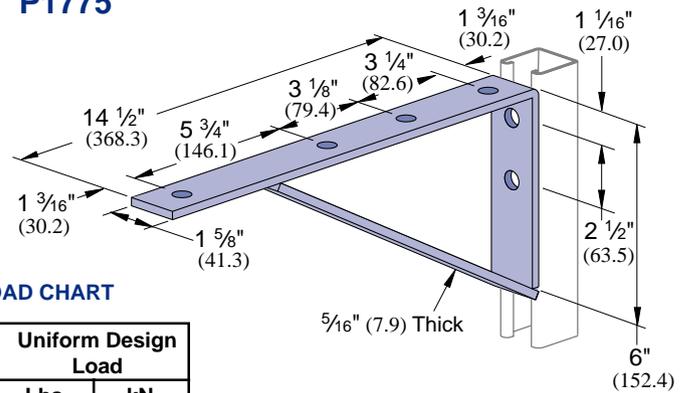


Safety Factor  
2 1/2

Material: 1/4" (6.4) thick steel.

Wt/C 264 Lbs (119.7 kg)

## P1775



5/16" (7.9) Thick

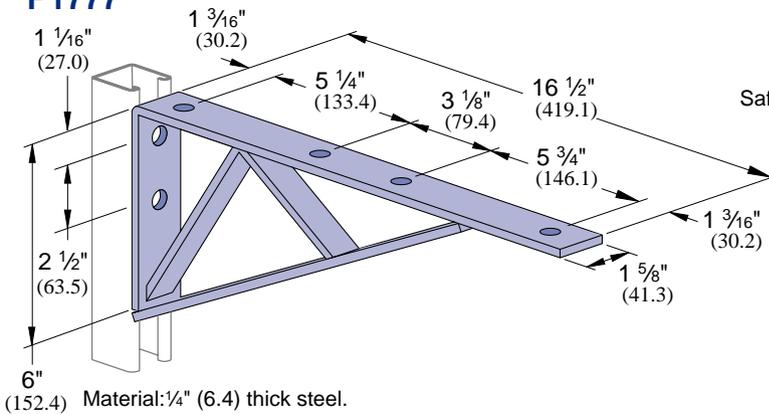
Material: 1/4" (6.4) thick steel.

Wt/C 295 Lbs (133.8 kg)

P1773, P1775 LOAD CHART

Vertical Channel		Uniform Design Load	
Part No.	Gage	Lbs	kN
P1000	12	900	4.0
P1100	14	800	3.6
P2000	16	450	2.0

## P1777



Safety Factor  
2 1/2

Material: 1/4" (6.4) thick steel.

Wt/C 385 Lbs (174.6 kg)

P1777 LOAD CHART

Vertical Channel		Uniform Design Load	
Part No.	Gage	Lbs	kN
P1000	12	1200	5.3
P1100	14	900	4.0
P2000	16	600	2.7

### NOTE

When used for mechanical supports, load capacities of brackets and fittings should be in compliance with the American Standard Code for Pressure Piping.

# BRACKETS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P2491 R-L thru P2503 R-L

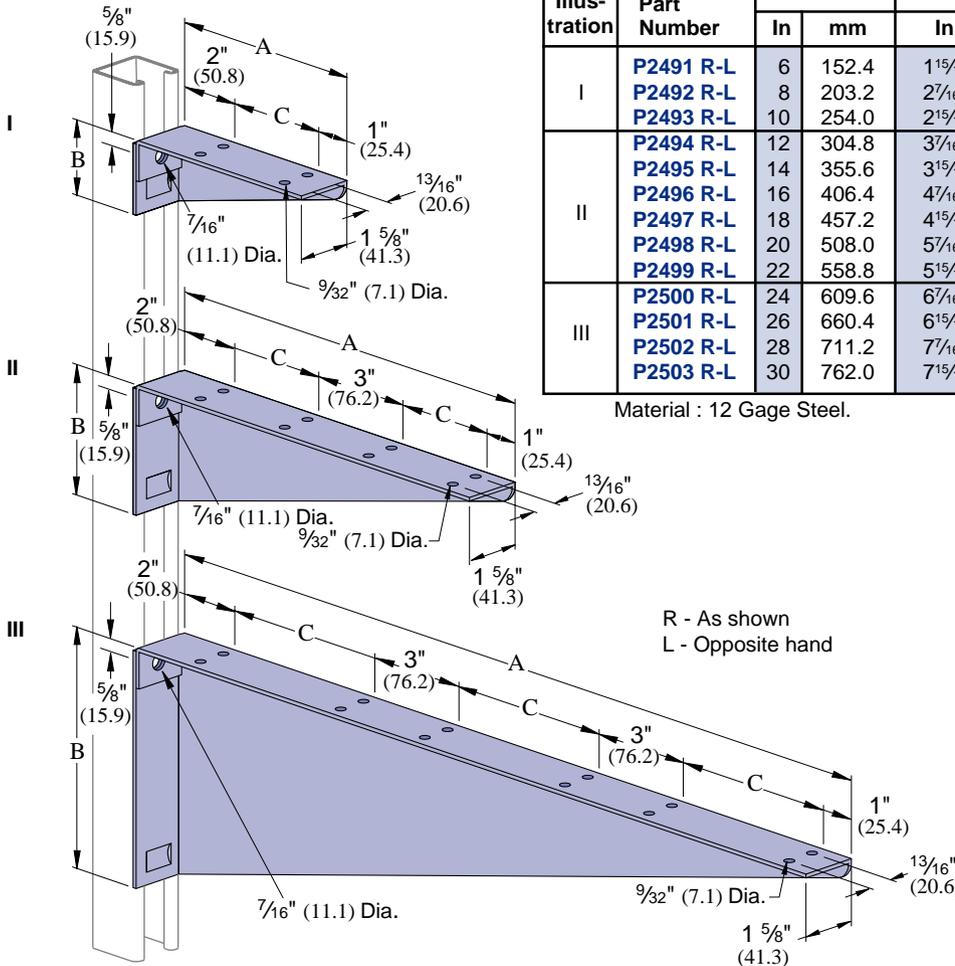


Illustration	Part Number	A		B		C		Weight/C	
		In	mm	In	mm	In	mm	Lbs	kg
I	P2491 R-L	6	152.4	1 15/16	49.2	3	76.2	67	30.4
	P2492 R-L	8	203.2	2 7/16	61.9	5	127.0	92	41.7
	P2493 R-L	10	254.0	2 5/16	74.6	7	177.8	120	54.4
II	P2494 R-L	12	304.8	3 7/16	87.3	3	76.2	152	68.9
	P2495 R-L	14	355.6	3 15/16	100.0	4	101.6	173	78.5
	P2496 R-L	16	406.4	4 7/16	112.7	5	127.0	223	101.2
	P2497 R-L	18	457.2	4 15/16	125.4	6	152.4	266	120.7
	P2498 R-L	20	508.0	5 7/16	138.1	7	177.8	308	139.7
	P2499 R-L	22	558.8	5 15/16	150.8	8	203.2	355	161.0
III	P2500 R-L	24	609.6	6 7/16	163.5	5	127.0	400	181.4
	P2501 R-L	26	660.4	6 15/16	176.2	5 1/16	144.5	445	201.8
	P2502 R-L	28	711.2	7 7/16	188.9	6 5/16	160.3	493	223.6
	P2503 R-L	30	762.0	7 15/16	201.6	7	177.8	545	247.2

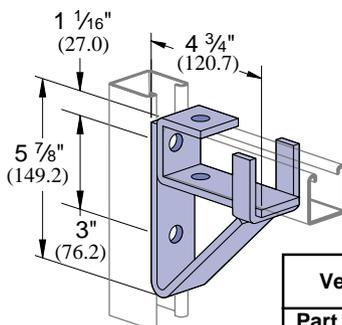
Material : 12 Gage Steel.

R - As shown  
L - Opposite hand

Vertical Channel		Uniform Design Load	
Part No.	Gage	Lbs	kN
P1000	12	300	1.3
P1100	14	250	1.1
P2000	16	200	0.9

Safety Factor - 2 1/2

## P1075



P1000  
P1100  
P2000  
P4001

Material: 1/4" (6.4) thick steel.

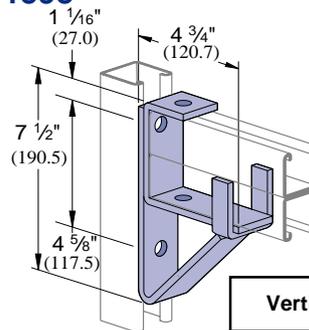
Wt/C 229 Lbs (103.9 kg)

Vertical Channel		Allowable Moment*	
Part No.	Gage	In-Lbs	N*m
P1000	12	5100	576
P1100	14	4400	500
P2000	16	3200	360

Safety Factor - 2 1/2

\* Allowable moment for fitting only. Channel may determine overall capacity.

## P1593



P1001  
P1101  
P5000  
P2001

Material: 1/4" (6.4) thick steel.

Wt/C 272 Lbs (123.4 kg)

Vertical Channel		Allowable Moment*	
Part No.	Gage	In-Lbs	N*m
P1000	12	13000	1470
P1100	14	9100	1030
P2000	16	6500	730

Safety Factor - 2 1/2

\* Allowable moment for fitting only. Channel may determine overall capacity.

### NOTE

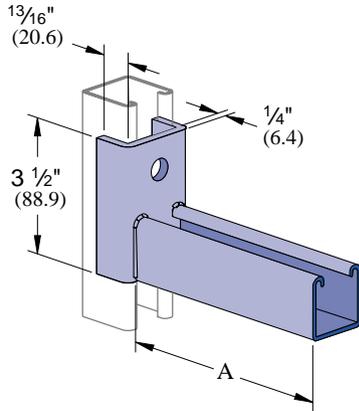
When used for mechanical supports, load capacities of brackets and fittings should be in compliance with the American Standard Code for Pressure Piping.

# BRACKETS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



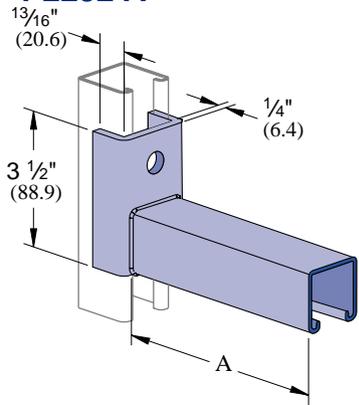
## P2231 P2232



Safety Factor  
2 1/2

Part Number	"A"		Weight/C		Vertical Channel		Uniform Design Load	
	In	mm	Lbs	kg	Part No.	Gage	Lbs	kN
P2231	6	152.4	191	86.6	P1000	12	1600	7.1
					P1100	14	1200	5.3
					P2000	16	800	3.6
P2232	12	304.8	292	132.4	P1000	12	800	3.6
					P1100	14	600	2.7
					P2000	16	400	1.8

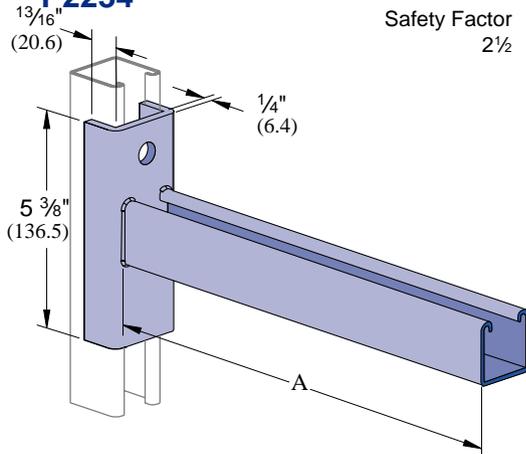
## P2231 A P2232 A



Safety Factor  
2 1/2

Part Number	"A"		Weight/C		Vertical Channel		Uniform Design Load	
	In	mm	Lbs	kg	Part No.	Gage	Lbs	kN
P2231A	6	152.4	191	86.6	P1000	12	1600	7.1
					P1100	14	1200	5.3
					P2000	16	800	3.6
P2232A	12	304.8	292	132.4	P1000	12	800	3.6
					P1100	14	600	2.7
					P2000	16	400	1.8

## P2233 P2234



Safety Factor  
2 1/2

Part Number	"A"		Weight/C		Vertical Channel		Uniform Design Load	
	In	mm	Lbs	kg	Part No.	Gage	Lbs	kN
P2233	18	457.2	436	197.8	P1000	12	600	2.7
					P1100	14	450	2.0
					P2000	16	300	1.3
P2234	24	609.6	536	243.1	P1000	12	450	2.0
					P1100	14	330	1.5
					P2000	16	220	1.0

### NOTE

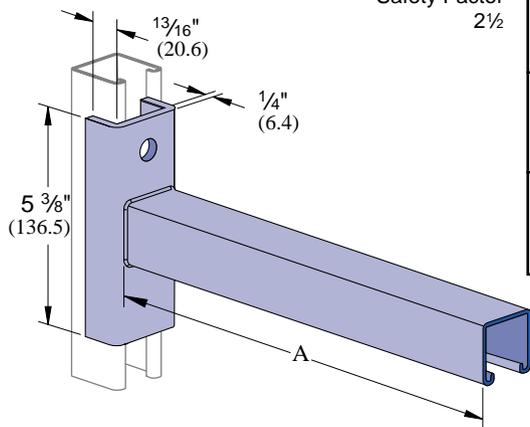
When used for mechanical supports, load capacities of brackets and fittings should be in compliance with the American Standard Code for Pressure Piping.

# BRACKETS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



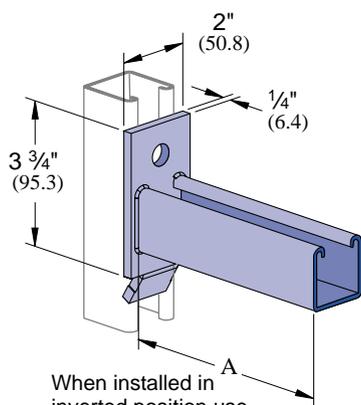
## P2233 A P2234 A



Safety Factor  
2 1/2

Part Number	"A"		Weight/C		Vertical Channel		Uniform Design Load	
	In	mm	Lbs	kg	Part No.	Gage	Lbs	kN
P2233A	18	457.2	436	197.8	P1000	12	600	2.7
					P1100	14	450	2.0
					P2000	16	300	1.3
P2234A	24	609.6	536	243.1	P1000	12	450	2.0
					P1100	14	330	1.5
					P2000	16	220	1.0

## P2513 thru P2516

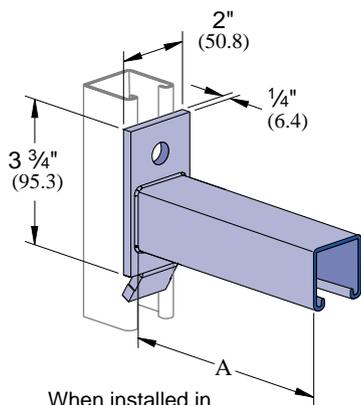


Safety Factor  
2 1/2

When installed in inverted position use 60% of loads shown.

Part Number	"A"		Weight/C		Vertical Channel		Uniform Design Load	
	In	mm	Lbs	kg	Part No.	Gage	Lbs	kN
P2513	6	152.4	161	73.0	P1000	12	1200	5.3
					P1100	14	800	3.6
					P2000	16	600	2.7
P2514	12	304.8	261	118.4	P1000	12	600	2.7
					P1100	14	400	1.8
					P2000	16	300	1.3
P2515	18	457.2	361	163.7	P1000	12	400	1.8
					P1100	14	270	1.2
P2516	24	609.6	461	209.1	P2000	16	200	0.9
					P1000	12	300	1.3
					P1100	14	200	0.9

## P2513 A thru P2516 A



Safety Factor  
2 1/2

When installed in inverted position use 60% of loads shown.

Part Number	"A"		Weight/C		Vertical Channel		Uniform Design Load	
	In	mm	Lbs	kg	Part No.	Gage	Lbs	kN
P2513A	6	152.4	161	73.0	P1000	12	1200	5.3
					P1100	14	800	3.6
					P2000	16	600	2.7
P2514A	12	304.8	261	118.4	P1000	12	600	2.7
					P1100	14	400	1.8
					P2000	16	300	1.3
P2515A	18	457.2	361	163.7	P1000	12	400	1.8
					P1100	14	270	1.2
					P2000	16	200	0.9
P2516A	24	609.6	461	209.1	P1000	12	300	1.3
					P1100	14	200	0.9
					P2000	16	150	0.7

### NOTE

When used for mechanical supports, load capacities of brackets and fittings should be in compliance with the American Standard Code for Pressure Piping.

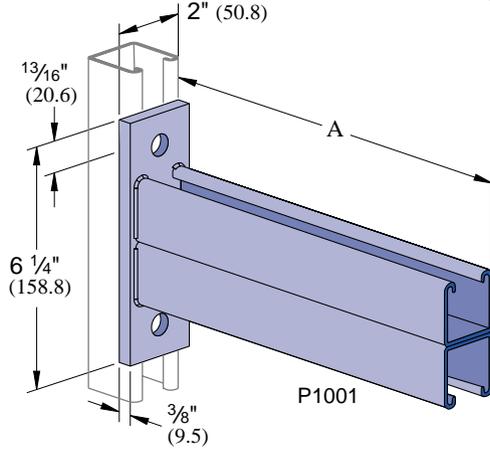
# BRACKETS AND BRACE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



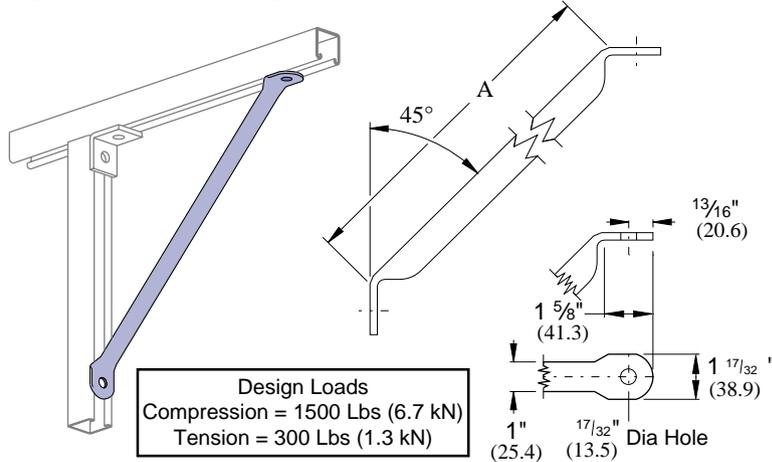
## P2542 thru P2546

Safety Factor 2 1/2

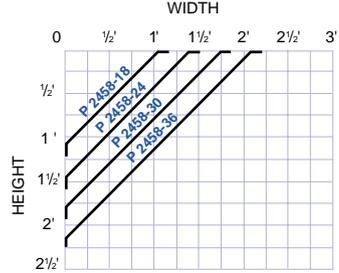


Part Number	"A" Dimension		Weight/C		Vertical Channel		Uniform Design Load	
	In	mm	Lbs	kg	Part No.	Gage	Lbs	kN
P2542	12	304.8	502	227.7	P1000	12	2000	8.9
					P1100	14	1400	6.2
					P2000	16	1000	4.4
P2543	18	457.2	692	313.9	P1000	12	1300	5.8
					P1100	14	900	4.0
					P2000	16	650	2.9
P2544	24	609.6	882	400.1	P1000	12	1000	4.4
					P1100	14	700	3.1
					P2000	16	500	2.2
P2545	30	762.0	1072	486.3	P1000	12	800	3.6
					P1100	14	560	2.5
					P2000	16	400	1.8
P2546	36	914.4	1262	572.4	P1000	12	650	2.9
					P1100	14	450	2.0
					P2000	16	320	1.4

## P2458-18 thru P2458-36



Design Loads  
 Compression = 1500 Lbs (6.7 kN)  
 Tension = 300 Lbs (1.3 kN)

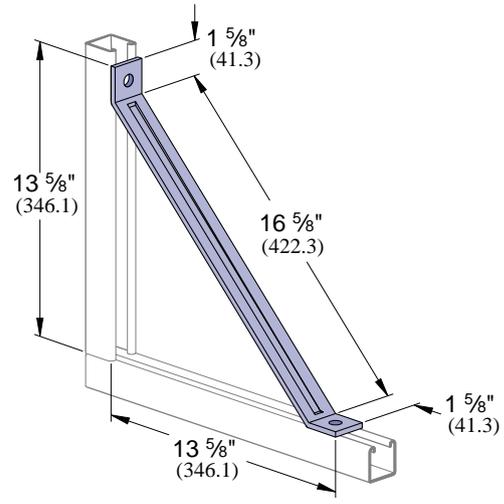


### TUBULAR KNEE BRACES

Part Number	"A" Dimension		Weight/C	
	In	mm	Lbs	kg
P2458-18	18	457.2	116	52.6
P2458-24	24	609.6	149	67.6
P2458-30	30	762.0	181	82.1
P2458-36	36	914.4	214	97.1

## P2452

### KNEE BRACE



Design Axial Load  
 1200 Lbs (5.3 kN)

Material: 1/4" (6.4) thick steel.  
 Wt/C 277 Lbs (125.6 kg)

### NOTE

When used for mechanical supports, load capacities of brackets and fittings should be in compliance with the American Standard Code for Pressure Piping.

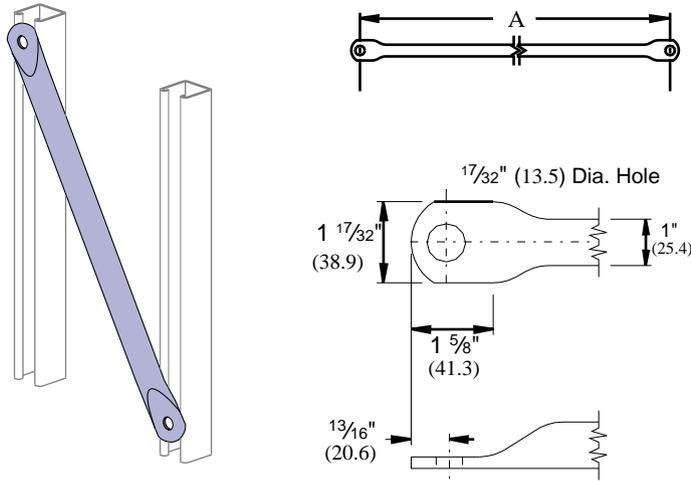
# BRACE FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



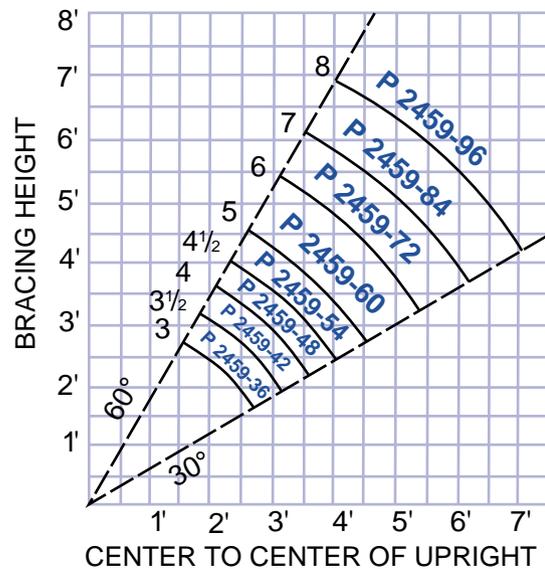
## P2459-36 thru P2459-96

## TUBULAR BACK BRACES



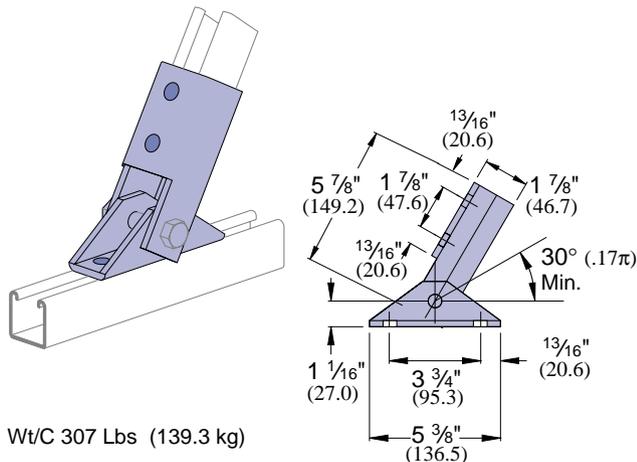
Part Number	"A" Dimension		Weight/C	
	In	mm	Lbs	kg
P2459-36	36	914.4	205	93.0
P2459-42	42	1066.8	237	107.5
P2459-48	48	1219.2	270	122.5
P2459-54	54	1371.6	302	137.0
P2459-60	60	1524.0	334	151.5
P2459-72	72	1828.8	400	181.4
P2459-84	84	2133.6	465	210.9
P2459-96	96	2438.4	530	240.4

1. The vertical lines of the graph correspond to the center to center line dimension of the uprights.
2. Along this vertical line locate the (maximum useable) horizontal bracing height line.
3. The arc line that intersects the point formed by the intersection of the two lines, indicates the brace required.
4. 60° - 30° maximum, minimum brace angles are indicated for maximum effect.



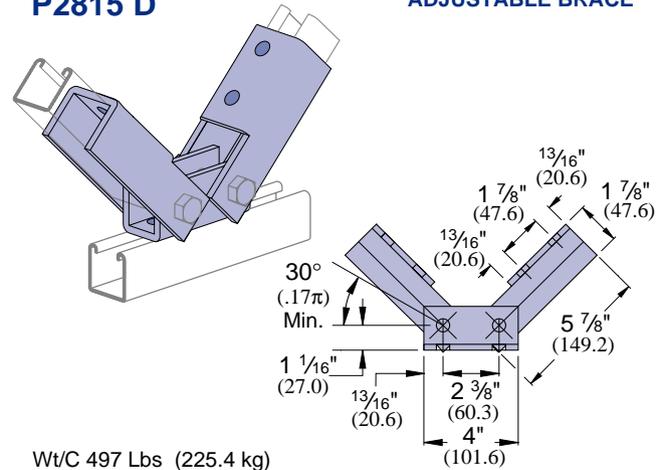
## P2815

## ADJUSTABLE BRACE



## P2815 D

## ADJUSTABLE BRACE



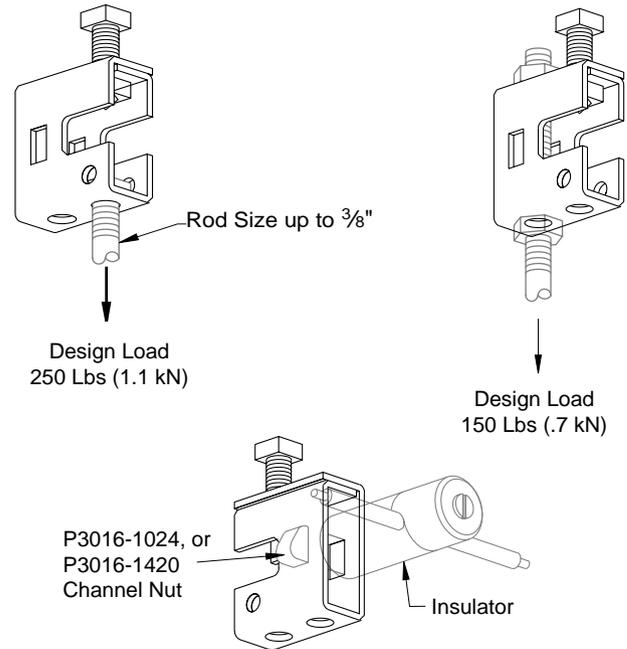
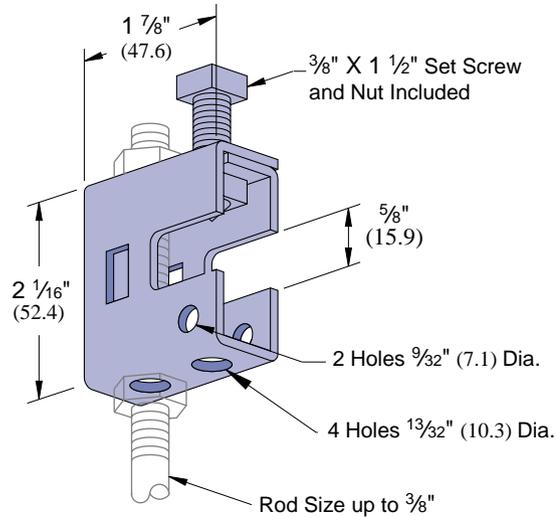
Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	1 3/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# BEAM CLAMPS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P2675

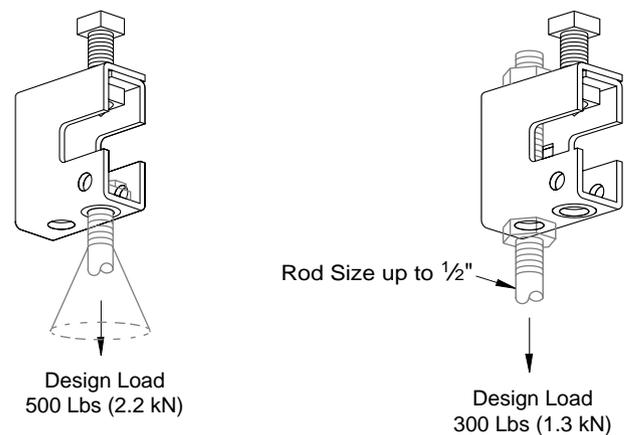
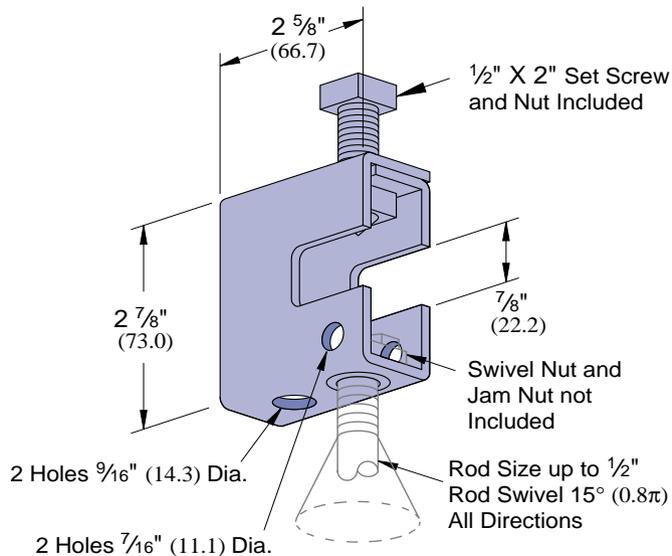


Clamp Materials: .105" (2.7) thick steel.

Wt/C 33 Lbs (15.0 kg)

Clamp P2675 is designed for light duty rod suspension. It also may be used with P3016-1024 or P3016-1420 nut as illustrated above for mounting insulators, etc.

## P2676



Clamp Materials: 1/8" (3.2) thick steel.

Wt/C 72 Lbs (32.7 kg)

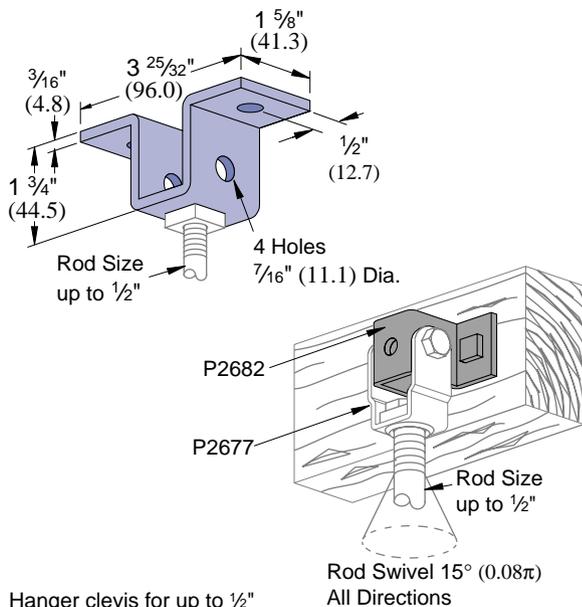
Clamp P2676 provides a means of rod suspension where a free swing of up to 15° (0.8π) is required. Clamp will accommodate 1/4" (6.4), 3/8" (9.5), or 1/2" (12.7) rods. Order swivel nuts P2679-4, -6, or -8 as required. Clamp may also be used with P2677 as illustrated in application drawings on page 113.

# BEAM CLAMPS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



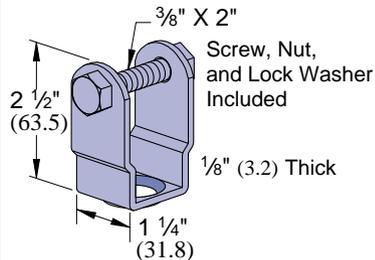
## P2682



Hanger clevis for up to 1/2" (12.7) rod suspension from wood ceilings. May also be used with P2677 as illustrated in application drawings.

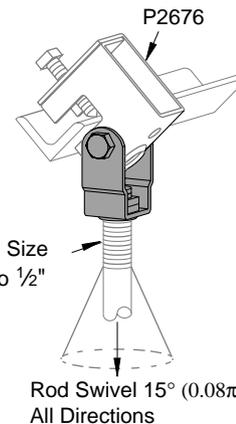
Wt/C 55 Lbs (24.9 kg)

## P2677



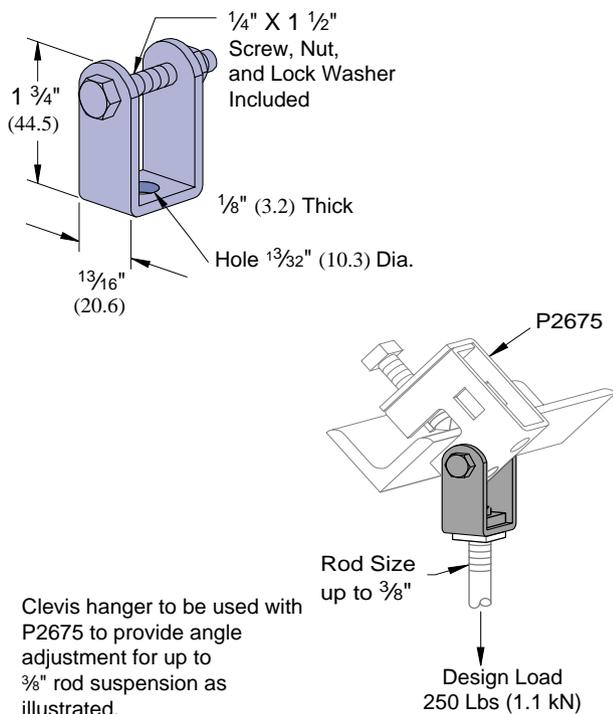
Clevis hanger to be used with P2676 or P2682 to provide angle adjustment and 15° (0.08 π) free swing for up to 1/2" (12.7) rod suspension. Order swivel nuts P2679-4, -6, or -8 as required.

Wt/C 30 Lbs (13.6 kg)



Design Load  
500 Lbs (2.2 kN)

## P2674

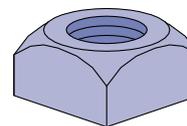


Clevis hanger to be used with P2675 to provide angle adjustment for up to 3/8" rod suspension as illustrated.

Wt/C 17 Lbs (7.7 kg)

## P2679-4, -6, & -8

### SWIVEL NUT



- Use with P2676 and P2677.
- Order size as required.

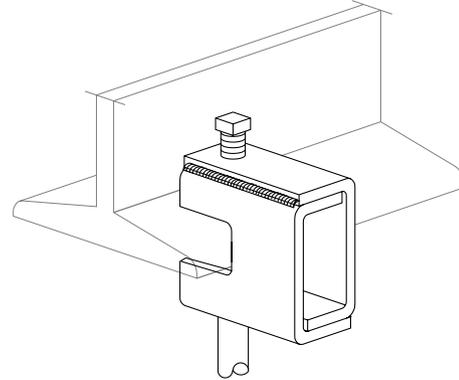
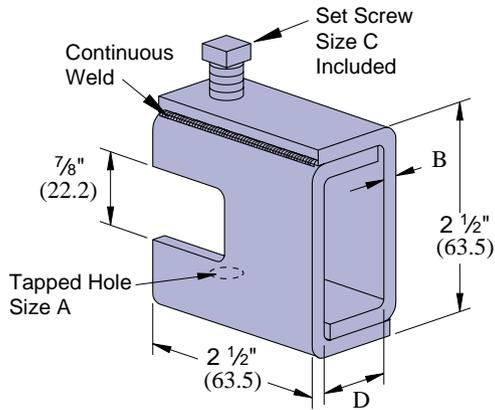
Part Number	Thread Size	Weight/C	
		Lbs	kg
P2679-4	1/4"-20	4	1.8
P2679-6	3/8"-16	5	2.3
P2679-8	1/2"-13	6	2.7

# BEAM CLAMPS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



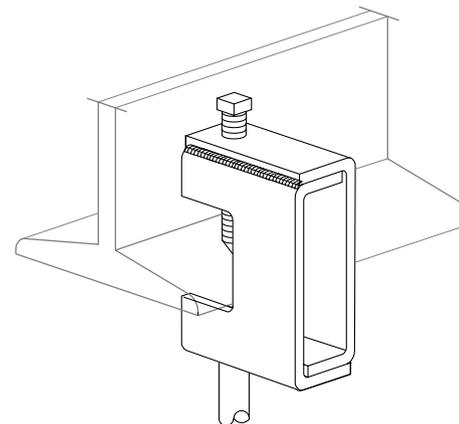
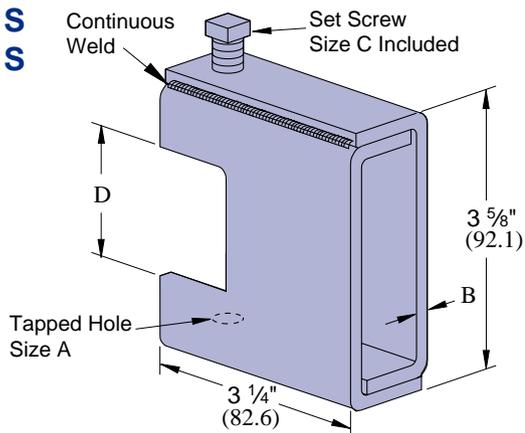
## P1648 S thru P1653 S



For beams under 7/8" (22.2) thick flange.

Part Number	"A"		"B"		"C"		"D"		Weight/C		Design Load	
	In	mm	In	mm	In	mm	In	mm	Lbs	kg	Lbs	kN
<b>P1648 S</b>	1/4 - 20	3.2	1/8	3.2	3/8 x 1 1/2	7/8	22.2	67	30.4	650	2.9	
<b>P1649 S</b>	5/16 - 18	3.2	1/8	3.2	3/8 x 1 1/2	7/8	22.2	67	30.4	650	2.9	
<b>P1649 AS</b>	3/8 - 16	3.2	1/8	3.2	3/8 x 1 1/2	7/8	22.2	67	30.4	650	2.9	
<b>P1650 S</b>	3/8 - 16	4.8	3/16	4.8	1/2 x 1 1/2	15/16	23.8	100	45.4	1100	4.9	
<b>P1650 AS</b>	1/2 - 13	4.8	3/16	4.8	1/2 x 1 1/2	15/16	23.8	100	45.4	1100	4.9	
<b>P1651 S</b>	1/2 - 13	6.4	1/4	6.4	1/2 x 1 1/2	15/16	23.8	130	59.0	1600	7.1	
<b>P1651 AS</b>	5/8 - 11	6.4	1/4	6.4	1/2 x 1 1/2	15/16	23.8	130	59.0	1600	7.1	
<b>P1652 S</b>	5/8 - 11	7.9	5/16	7.9	5/8 x 1 1/2	15/16	33.3	160	72.6	2400	10.7	
<b>P1653 S</b>	3/4 - 10	7.9	5/16	7.9	5/8 x 1 1/2	15/16	33.3	160	72.6	2400	10.7	

## P2398 S P2401 S P2403 S



For beams between 3/4" (19.1) to 1 5/8" (41.3) thick flanges.

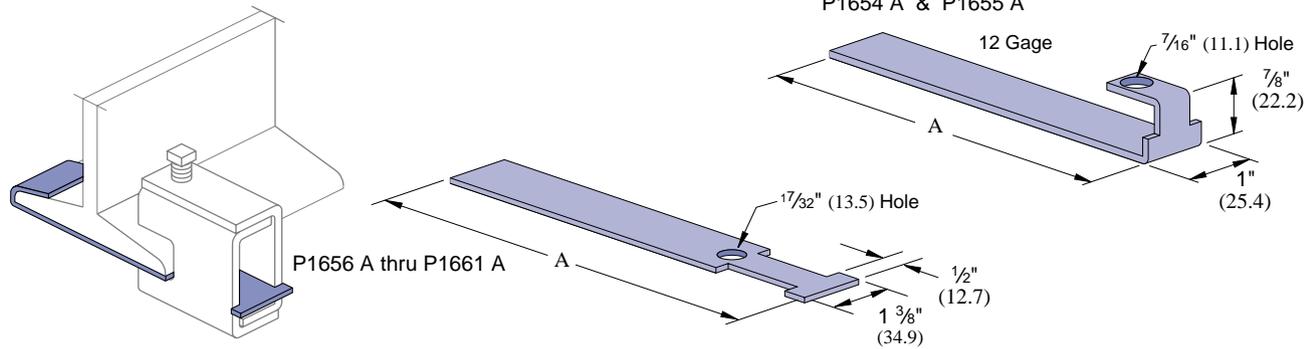
Part Number	"A"		"B"		"C"		"D"		Weight/C		Design Load	
	In	mm	In	mm	In	mm	In	mm	Lbs	kg	Lbs	kN
<b>P2398 S</b>	1/4 - 20	3.2	1/8	3.2	3/8 x 2	1 21/32	42.1	109	49.4	800	3.6	
<b>P2401 S</b>	3/8 - 16	4.8	3/16	4.8	1/2 x 2	1 11/16	42.9	156	70.8	1300	5.8	
<b>P2403 S</b>	1/2 - 13	6.4	1/4	6.4	1/2 x 2	1 11/16	42.9	201	91.2	1900	8.5	

# BEAM CLAMPS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



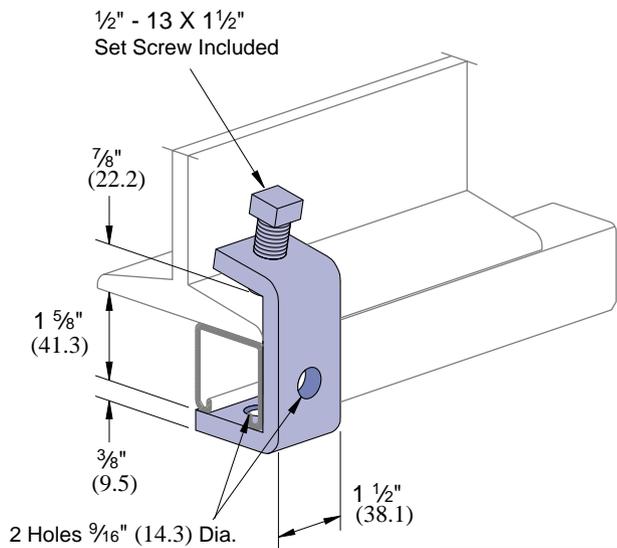
## P1654 A thru P1661 A



Strap Part Number	Flange Width		"A"		Weight/C		Beam Clamp Used With
	In	mm	In	mm	Lbs	kg	
<b>P1654 A</b>	6	152.4	7	177.8	25	11.3	P2675
<b>P1655 A</b>	9	228.6	10	254.0	34	15.4	P2675
<b>P1656 A</b>	6	152.4	9	228.6	35	15.9	P1648 S Thru P1651 AS, and P2398 S Series
<b>P1657 A</b>	9	228.6	12	304.8	47	21.3	
<b>P1658 A</b>	12	304.8	15	381.0	59	26.8	
<b>P1659 A</b>	6	152.4	9	228.6	33	15.0	P2676
<b>P1660 A</b>	9	228.6	12	304.8	45	20.4	P2676
<b>P1661 A</b>	12	304.8	15	381.0	57	25.9	P2676

For beams under 7/8" (22.2) thick flange.

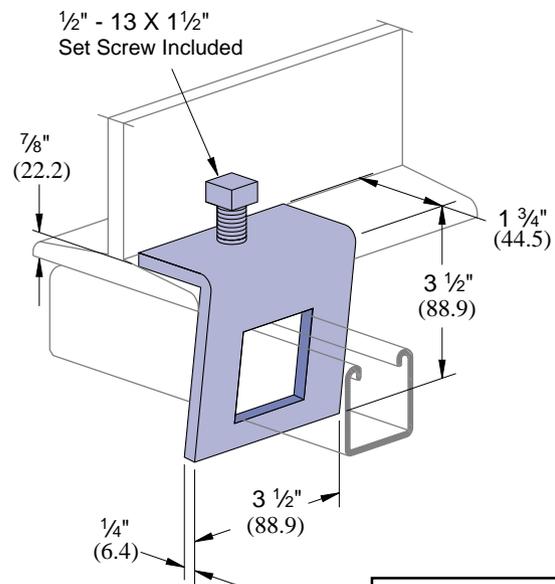
## P1271 S



Design Load Each  
500 Lbs (2.2 kN)  
Use in Pairs Only

Wt/C 95 Lbs (43.1 kg)

## P1796 S



Design Load Each  
480 Lbs (2.1 kN)  
Use in Pairs Only

For channel height 1 5/8" (41.3).

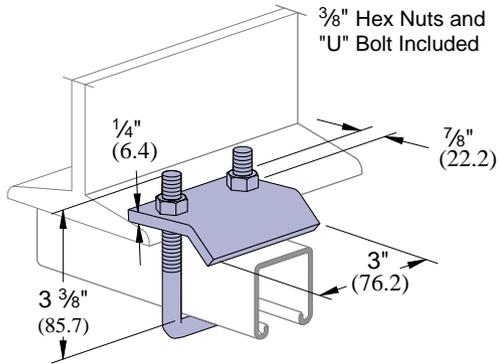
Wt/C 91 Lbs (41.3 kg)

# BEAM CLAMPS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## P2785

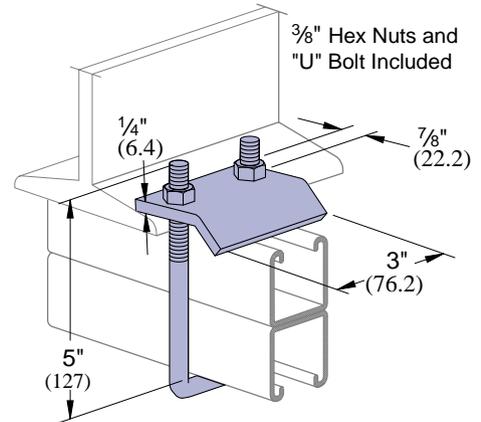


Design Load Each  
1000 Lbs (4.4 kN)  
Use in Pairs Only

- For use with Beams up to ¾" (19.1) Flanges and with Channels P1000, P1100, P2000, P3000, P3300, P3301, P4000, P4001, P4100, and P4101.

Wt/C 83 Lbs (37.6 kg)

## P2786

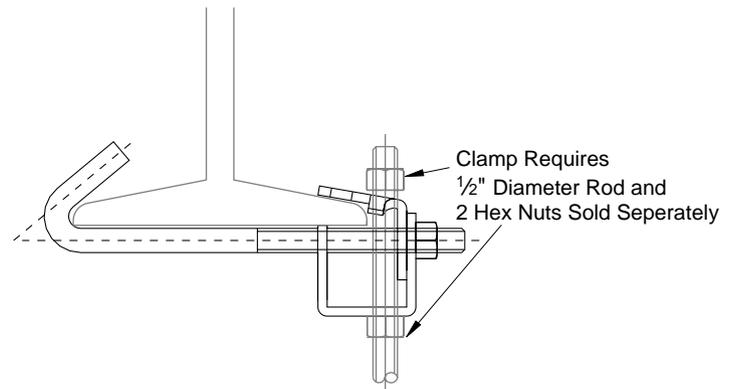
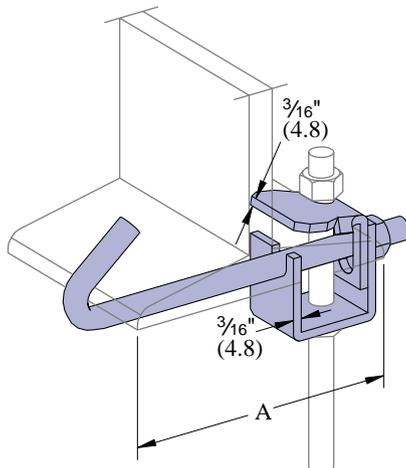


Design Load Each  
1000 Lbs (4.4 kN)  
Use in Pairs Only

- For use with Beams up to ¾" (19.1) Flanges and with Channels P1001, P1101, P2001, P3001, P5000, and P5500.

Wt/C 92 Lbs (41.7 kg)

## P2824-6,-9,-12



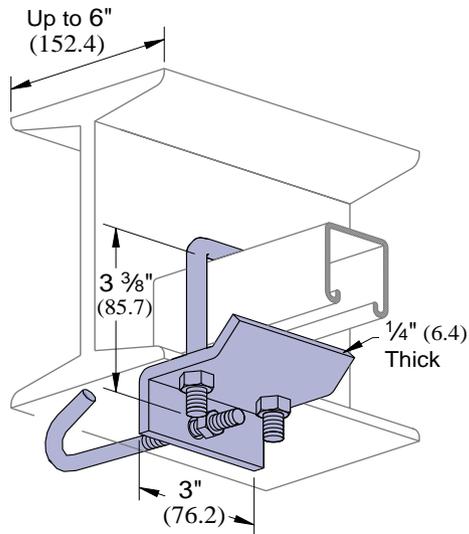
Part Number	"A"		Weight/C		Design Load	
	In	mm	Lbs	kg	Lbs	kN
<b>P2824-6</b>	2½ - 6	63.5 - 152.4	125	56.7	500	2.2
<b>P2824-9</b>	5½ - 9	139.7 - 228.6	140	63.5	500	2.2
<b>P2824-12</b>	8½ - 12	215.9 - 304.8	171	77.6	500	2.2

# BEAM CLAMPS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



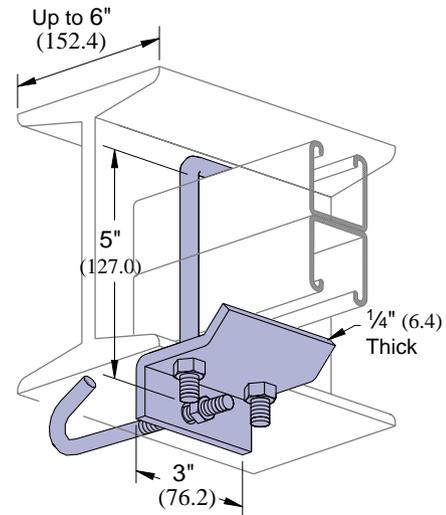
## P2867



- Includes: "J" Bolt, "U" Bolt and Hex Nuts.
- For use with Channels P1000, P1100, P2000, P3000, P3300, P3301, P4000, P4001, P4100, and P4101.

Wt/C 134 Lbs (60.8 kg)

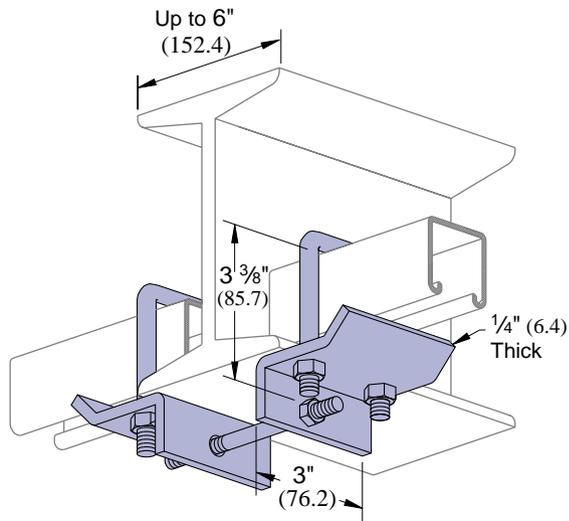
## P2867 A



- Includes: "J" Bolt, "U" Bolt and Hex Nuts.
- For use with Channel P1001, P1101, P2001, P3001, P5000, and P5500.

Wt/C 143 Lbs (64.9 kg)

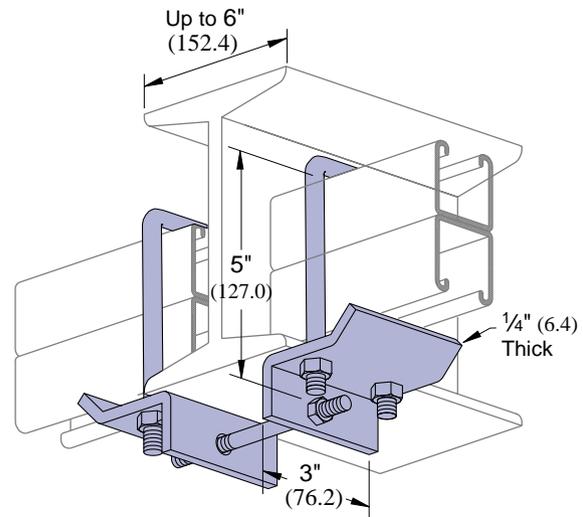
## P2868



- Includes: Center Rod, "U" Bolts and Hex Nuts.
- For use with Channels P1000, P1100, P2000, P3000, P3300, P3301, P4000, P4001, P4100, and P4101.

Wt/C 280 Lbs (127.0 kg)

## P2868 A



- Includes: Center Rod, "U" Bolts and Hex Nuts.
- For use with Channels P1001, P1101, P2001, P3001, P5000, and P5500.

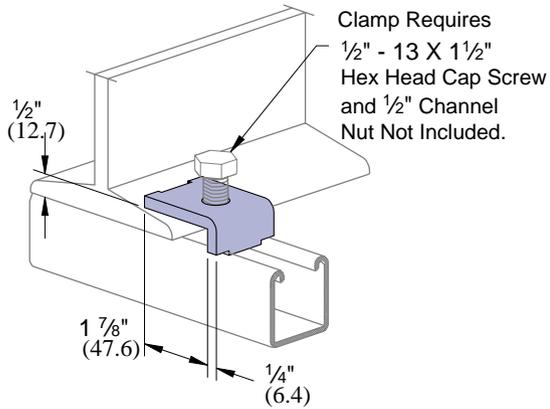
Wt/C 298 Lbs (135.2 kg)

# BEAM CLAMPS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

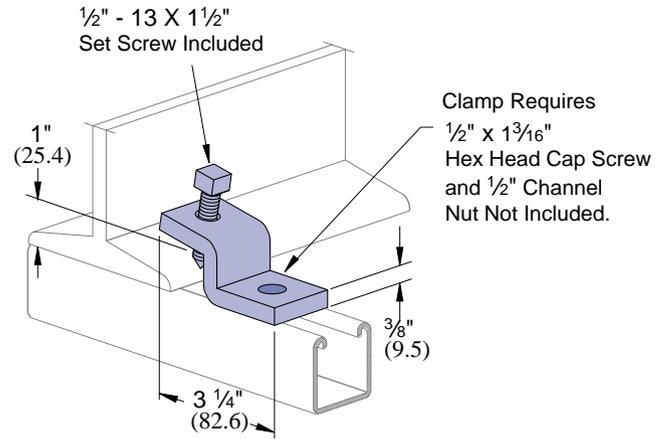


## P1386



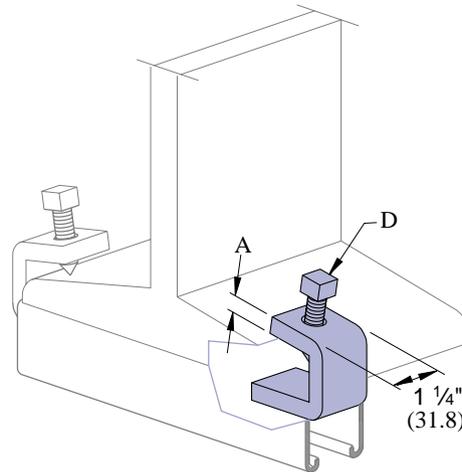
Channel Style	Weight/C		Design Load Each (Use in Pairs Only)	
	Lbs	kg	Lbs	kN
P1000	27	12.2	600	2.7
P1100			500	2.2
P2000			450	2.0

## P1379 S



Channel Style	Weight/C		Design Load Each (Use in Pairs Only)	
	Lbs	kg	Lbs	kN
P1000	75	34.0	600	2.7
P1100			500	2.2
P2000			450	2.0

## P1272 S P1985 S P1986 S



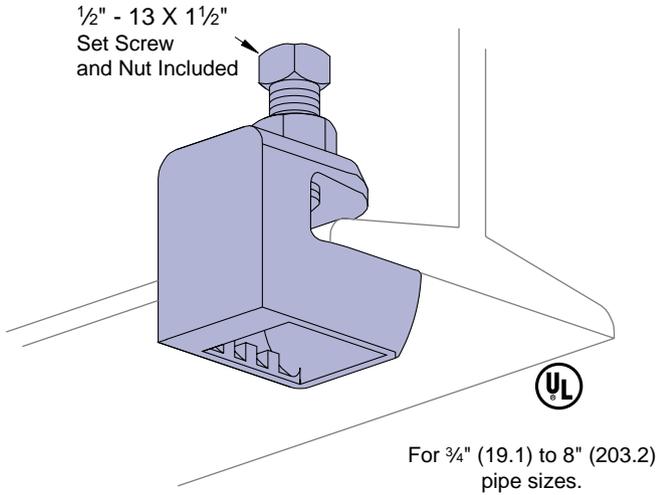
Part Number	"A"		Flange Thickness		Set Screw "D" Included	Weight/C		Design Load Per Pair (Use in Pairs Only)	
	In	mm	In	mm		Lbs	kg	Lbs	kN
P1272 S	1/4	6.4	Up to 3/4	Up to 19.1	3/8-16 x 1 1/2	39	17.7	450	2.0
P1985 S	3/8	9.5	Up to 3/4	Up to 19.1	1/2-13 x 1 1/2	62	28.1	1000	4.4
P1986 S	3/8	9.5	7/8 to 2	22.2 to 50.8	1/2-13 x 1 1/2	74	33.6	900	4.0

# BEAM CLAMPS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

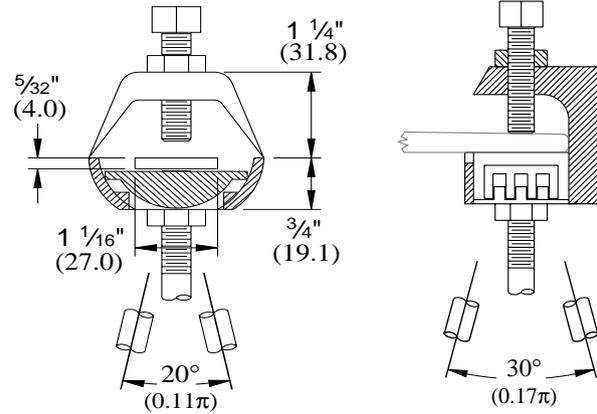


## M29



## SWIVEL BEAM CLAMP

Supports 3/8", 1/2", 5/8", 3/4",  
7/8" hanger rods.



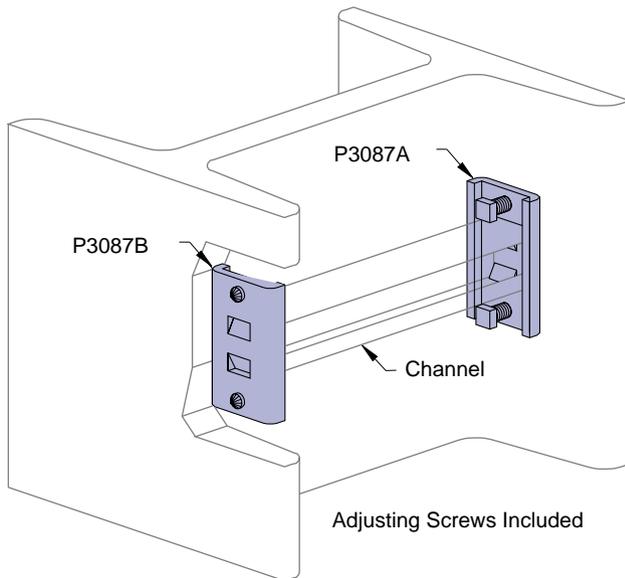
- For use with M2708 series swivel nut. (See page 177.)
  - It fits flanges up to 0.8" (20.3) thickness.
- Material: Malleable Iron.

Design Load  
750 Lbs (3.3 kN)

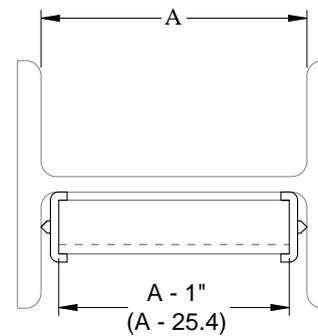
Wt/C 83 Lbs (37.6 kg)

Patent No. 2953874.

## P3087



## COLUMN INSERT



- Adjusting Screws Included.
- Unistrut channel not included.
- Part number P3087 consists of: 1 piece P3087A and 1 piece P3087B and 2 set screws.

Wt/C 136 Lbs (61.7 kg)

Channel Part Number	Design Pull Out Load		Design Slip Load	
	Lbs	kN	Lbs	kN
<b>P1000</b>	1000	4.4	800	3.6
<b>P1100</b>	700	3.1	500	2.2
<b>P2000</b>	500	2.2	300	1.3

Safety factor of 3.

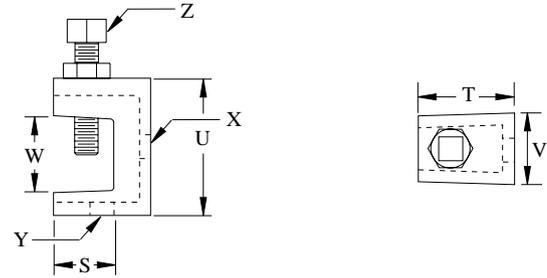
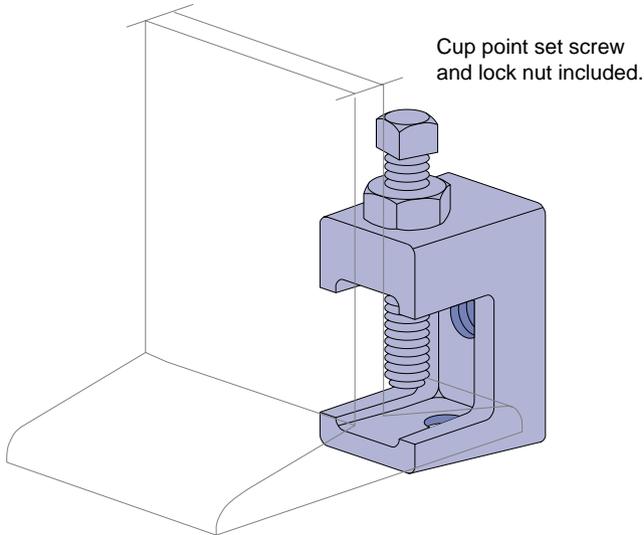
# BEAM CLAMPS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## PLLC025

## FLANGE CLAMP



X, Y are threaded holes.

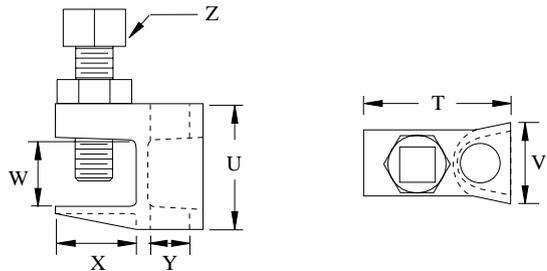
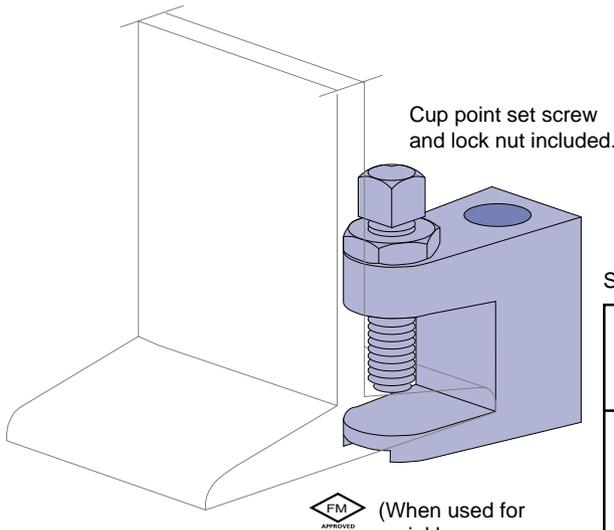
Part Number	Rod Size	Set Screw Size "Z"	Weight/C	
			Lbs	kg
PLLC025	1/4"	1/4"	16.0	7.3

Material: Malleable Iron.

Part Number	Dimensions								
	"S"		"T"		"U"		"V,W"		"X,Y"
	In	mm	In	mm	In	mm	In	mm	In
PLLC025	5/8	16	1	25	1 7/16	37	3/4	19	1/4 X 20

## PFL037 thru PFL050 T

## FLANGE CLAMP



Safety Factor: 5

Part Number	Rod Size	Set Screw Size "Z"	Weight/C		Max. Allowable Load	
			Lbs	kg	Lbs	kN
PFL037	3/8"	3/8"	28	12.7	550	2.4
PFL037 T	3/8"	3/8"	28	12.7	550	2.4
PFL050	1/2"	3/8"	40	18.1	700	3.1
PFL050 T	1/2"	3/8"	40	18.1	700	3.1

Material: Malleable Iron.

(When used for sprinkler systems only.)

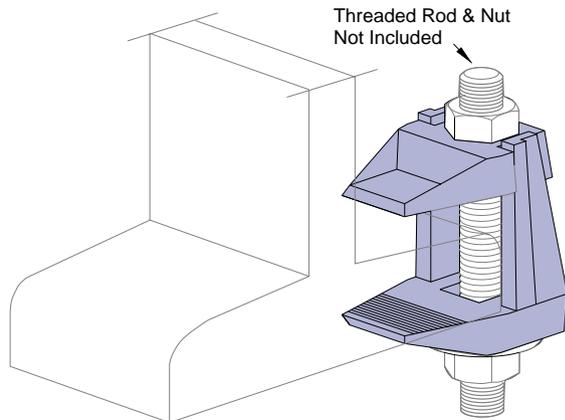
Part Number	Dimensions											
	"T"		"U"		"V"		"W"		"X"		"Y"	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
PFL037	1 1/16	43	1 9/16	40	7/8	22	3/4	19	1	25	7/16	11
PFL037 T	1 1/16	43	1 9/16	40	7/8	22	3/4	19	1	25	3/8 Tapped Hole	
PFL050	2	51	1 23/32	44	1	25	29/32	23	1 3/32	28	17/32	13
PFL050 T	2	51	1 23/32	44	1	25	29/32	23	1 3/32	28	1/2 Tapped Hole	

# BEAM CLAMPS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL

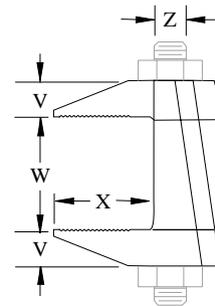


## PLF3037 thru PLF3075

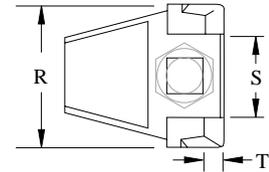


(When used for sprinkler systems only.)

Safety Factor: 5



### FLANGE CLAMP

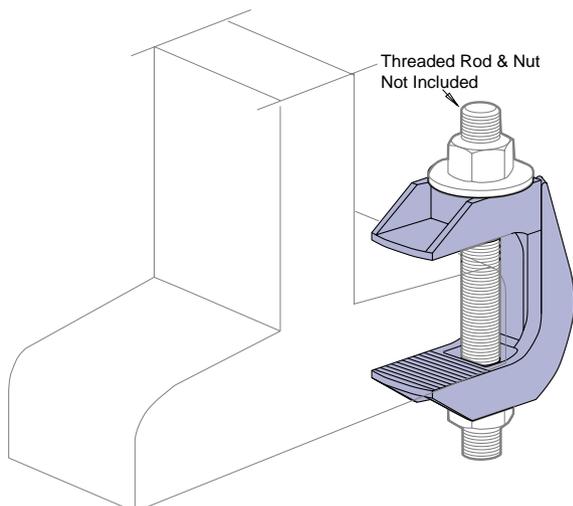


Part Number	Rod Size "Z"	Weight/C		Max. Allowable Load	
		Lbs	kg	Lbs	kN
<b>PLF3037</b>	¾"	53	24.0	440	2.0
<b>PLF3050</b>	½"	91	41.3	630	2.8
<b>PLF3062</b>	⅝"	186	84.4	1200	5.6
<b>PLF3075</b>	¾"	334	151.5	1880	8.4

Material: Malleable Iron

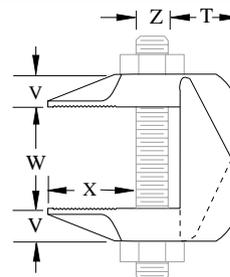
Part Number	Dimensions											
	"X"		"W"		"V"		"T"		"R"		"S"	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
<b>PLF3037</b>	1	25	0 - 1⅜	0 - 30	¾	10	⅝	7	1½	38	⅞	22
<b>PLF3050</b>	1⅜	35	0 - 1⅜	0 - 40	½	13	1⅜	9	1⅝	49	1⅜	29
<b>PLF3062</b>	1⅜	46	0 - 2⅜	0 - 56	⅝	16	½	13	2⅜	60	1⅜	37
<b>PLF3075</b>	2⅜	55	0 - 1¾	0 - 70	¾	19	⅝	16	3	76	1¾	45

## PLF9037 thru PLF9100

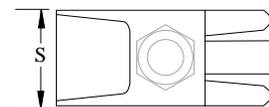


Material: Malleable Iron

Safety Factor: 5



### FLANGE CLAMP



Part Number	Rod Size	Weight/C		Max. Allowable Load	
		Lbs	kg	Lbs	kN
<b>PLF9037</b>	¾"	55	25.0	440	2.0
<b>PLF9050</b>	½"	122	55.4	630	2.8
<b>PLF9062</b>	⅝"	200	90.7	1260	5.6
<b>PLF9075</b>	¾"	367	166.5	1880	8.4
<b>PLF9100</b>	1"	1101	500.0	3150	14.0

Part Number	Dimensions									
	"X"		"W"		"V"		"T"		"S"	
	In	mm	In	mm	In	mm	In	mm	In	mm
<b>PLF9037</b>	1	25	¾ - 1⅜	19 - 42	½	13	¾	19	1	25
<b>PLF9050</b>	1⅜	35	1 - 2⅜	26 - 60	2⅜	17	1⅝	24	1⅜	30
<b>PLF9062</b>	1⅜	43	1⅜ - 2¾	29 - 69	1⅜	21	1⅜	28	1⅜	35
<b>PLF9075</b>	2	51	1¼ - 3¼	32 - 82	1	25	1⅜	35	1¾	45
<b>PLF9100</b>	3	76	1¾ - 3¾	45 - 95	1½	38	2⅜	55	2½	63

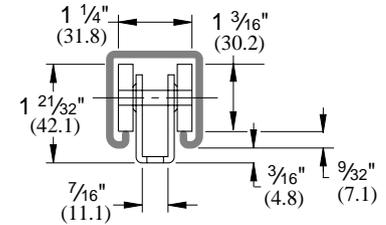
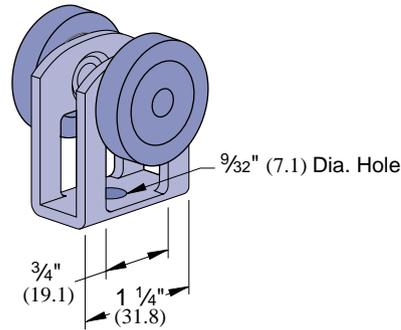
# TROLLEY ASSEMBLIES

FOR 1<sup>5</sup>/<sub>8</sub>" (41 MM) WIDTH SERIES CHANNEL



## P2749\* P2749 N†

### TROLLEY ASSEMBLY



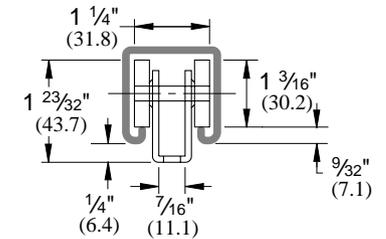
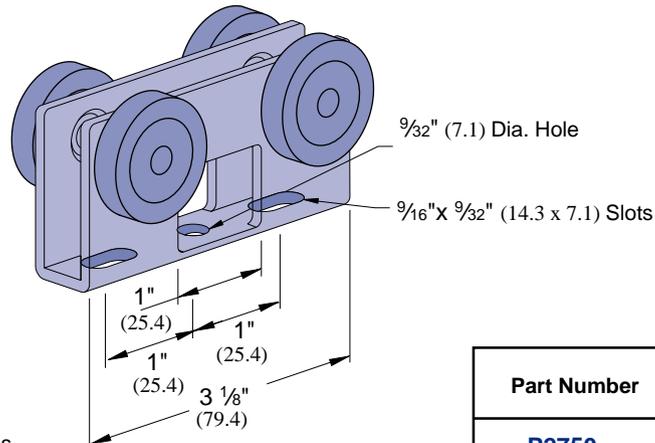
Clevis Material: 12 gage.

\*Wheel bearings are stainless steel, and should not be lubricated.  
† "N" indicates acetal wheels.

Part Number	Design Load		Weight/C	
	Lbs	kN	Lbs	kg
<b>P2749</b>	50	.2	21	9.5
<b>P2749 N</b>	10	.04	13	5.9

## P2750\* P2750 N†

### TROLLEY ASSEMBLY



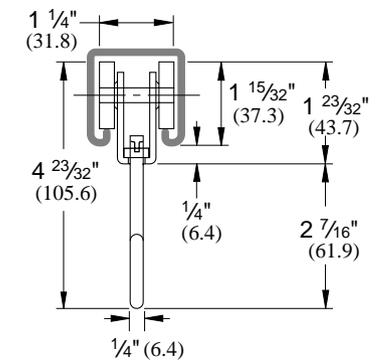
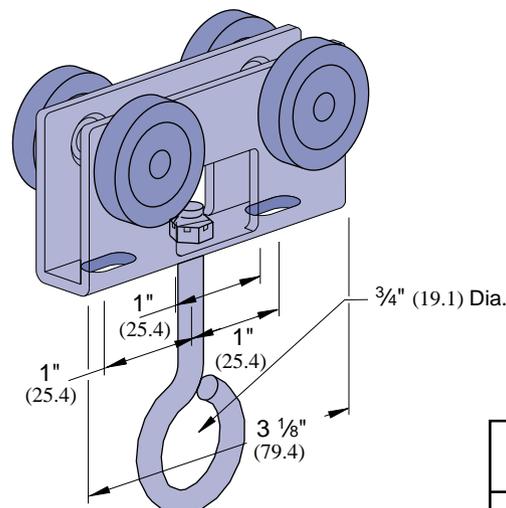
Clevis Material: 12 gage.

\*Wheel bearings are stainless steel, and should not be lubricated.  
† "N" indicates acetal wheels.

Part Number	Design Load		Weight/C	
	Lbs	kN	Lbs	kg
<b>P2750</b>	100	.4	55	24.9
<b>P2750 N</b>	20	.1	32	14.5

## P2751\* P2751 N†

### TROLLEY ASSEMBLY



Clevis Material: 12 gage.

\*Wheel bearings are stainless steel, and should not be lubricated.  
† "N" indicates acetal wheels.

Part Number	Design Load		Weight/C	
	Lbs	kN	Lbs	kg
<b>P2751</b>	100	.4	63	28.6
<b>P2751 N</b>	20	.1	40	18.1

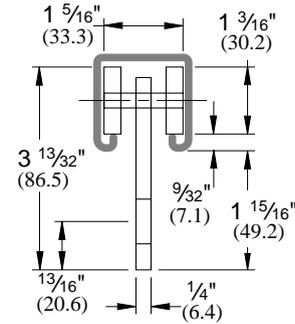
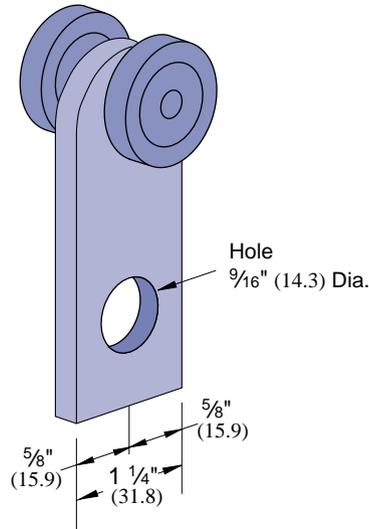
# TROLLEY ASSEMBLIES

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P2949

## TROLLEY ASSEMBLY



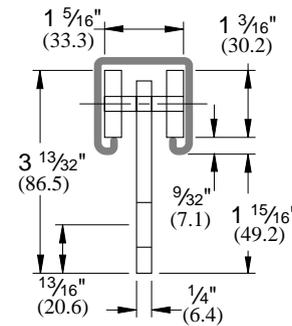
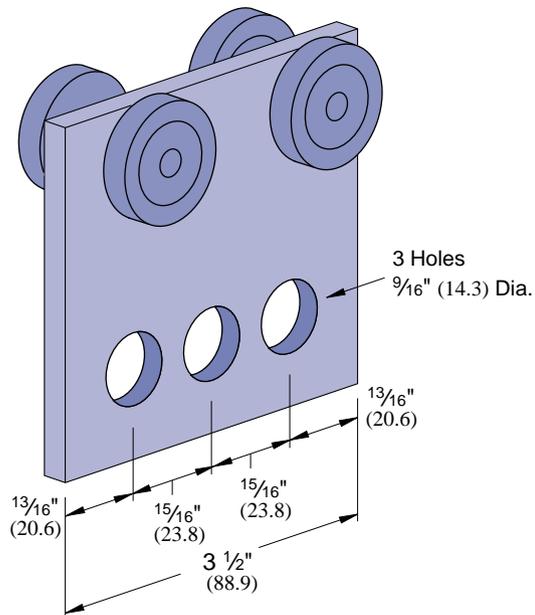
Wheel bearings are stainless steel. Do not lubricate.

Wt/C 46 Lbs (20.9 kg)

RPM	Design Load In P1000	
	Lbs	kN
600	150	.7
300	225	1.0
100	437	1.9

## P2950

## TROLLEY ASSEMBLY



Wheel bearings are stainless steel. Do not lubricate.

Wt/C 110 Lbs (49.9 kg)

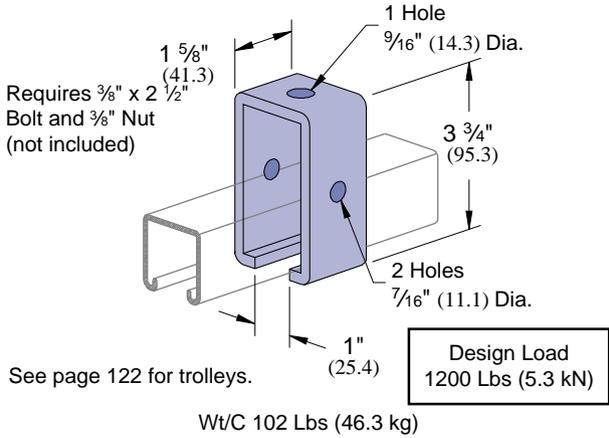
RPM	Design Load In P1000	
	Lbs	kN
600	300	1.3
300	450	2.0
100	600	2.7

# SPECIAL APPLICATION FITTINGS

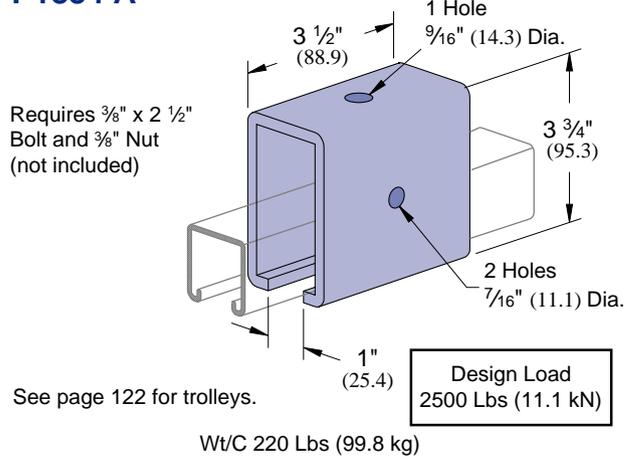
FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



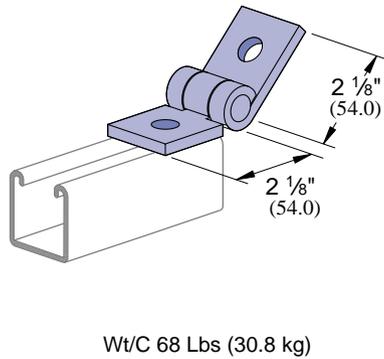
## P1834 CHANNEL TROLLEY SUPPORT



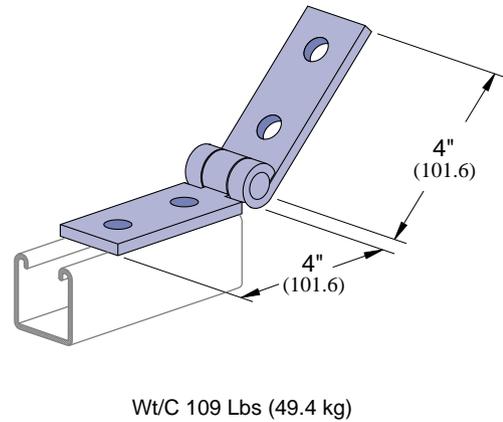
## P1834 A CHANNEL TROLLEY SUPPORT



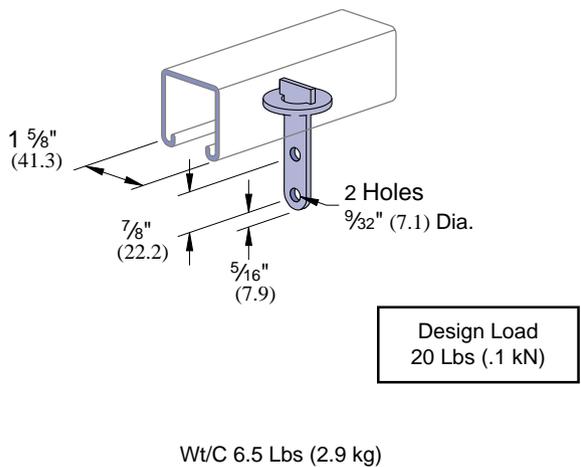
## P1843 ADJUSTABLE HINGE CONNECTION



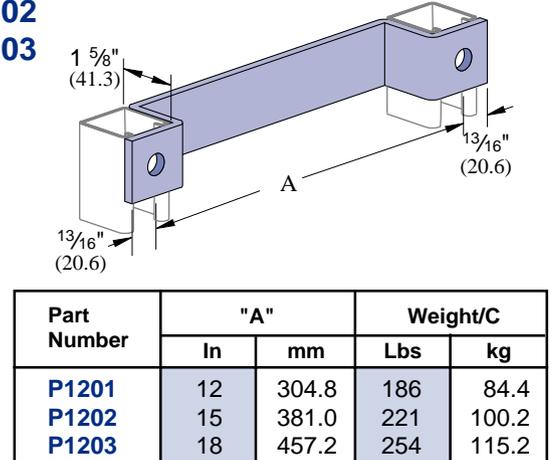
## P1354 ADJUSTABLE HINGE CONNECTION



## P5349 CURTAIN SLIDER



## P1201 P1202 P1203 LADDER RUNG



Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

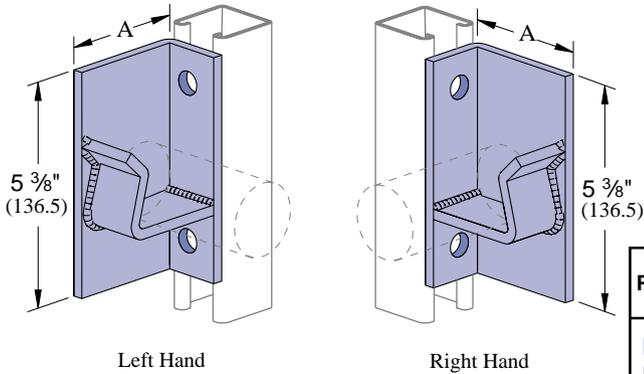
# SPECIAL APPLICATION FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P2354 R-L P2355 R-L

REEL RACK SUPPORTS FOR 1 1/4" AND 2" PIPE

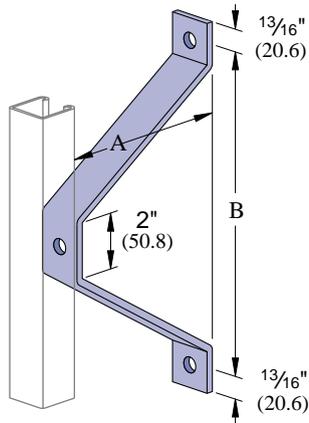


Vertical Channel		Max. Allowable Load	
Part No.	Gage	Lbs	kN
P1000	12	3000	13.3
P1100	14	2000	8.9
P2000	16	2000	8.9

Part Number	"A"		Std. Pipe Size		Weight/C	
	In	mm	In	mm	Lbs	kg
P2354 R-L	3	76.2	1 1/4	31.8	220	99.8
P2355 R-L	3 3/8	92.1	2	50.8	252	114.3

## P1204 thru P1208

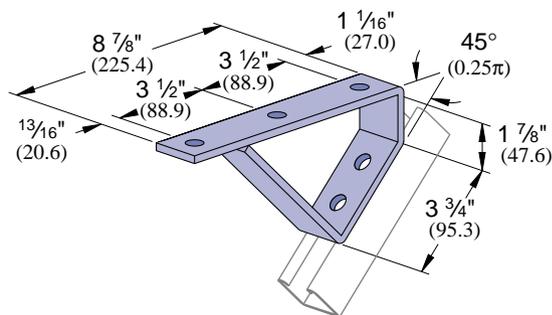
WALL LADDER BRACKET



Part Number	"A"		"B"		Weight/C	
	In	mm	In	mm	Lbs	kg
P1204	2 3/8	60.3	6	152.4	113	51.3
P1205	4 3/8	111.1	8	203.2	164	74.4
P1206	6 3/8	161.9	10	254.0	216	98.0
P1207	8 3/8	212.7	12	304.8	267	121.1
P1208	10 3/8	263.5	14	355.6	318	144.2

## P1944

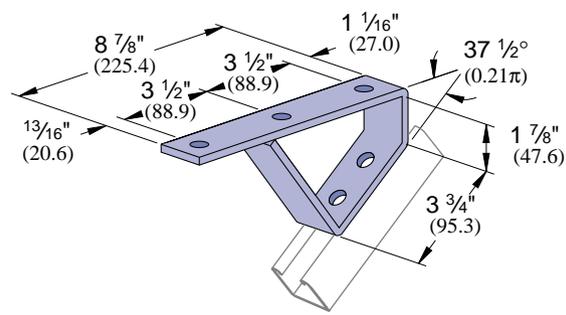
45° (.25π) STAIR TREAD SUPPORT



Wt/C 220 Lbs (99.8 kg)

## P2655

37 1/2° (.21π) STAIR TREAD SUPPORT



Wt/C 213 Lbs (96.6 kg)

Hole Size	Hole Spacing	Width	Thickness
5/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

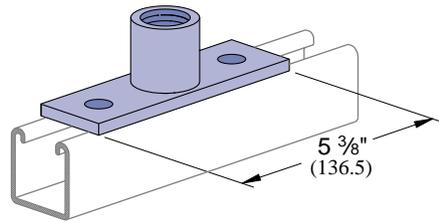
# SPECIAL APPLICATION FITTINGS & END CAPS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



**P2470-50**  
**P2470-75**  
**P2470-100**

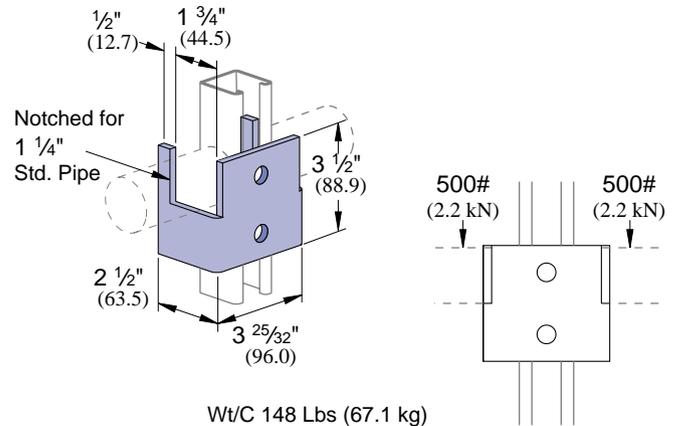
PIPE COUPLING FITTING



Part Number	Pipe Coupling Size In	Weight/C	
		Lbs	kg
<b>P2470-50</b>	1/2	77	34.9
<b>P2470-75</b>	3/4	93	42.2
<b>P2470-100</b>	1	103	46.7

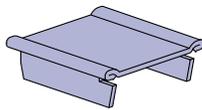
**P2454**

AXLE SUPPORT FOR  
1 1/4" (31.8) STANDARD PIPE

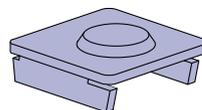


Wt/C 148 Lbs (67.1 kg)

**P1280, P2280**



**P1280 A, P2280 A**



**P1180, P4280, P5280, P5580**



Material: .075" (1.9)

Material: .060" (1.5)

Part Number	Use With Channel	Weight/C	
		Lbs	kg
<b>P1280</b>	P1000	11	5.0
<b>P2280</b>	P2000	11	5.0

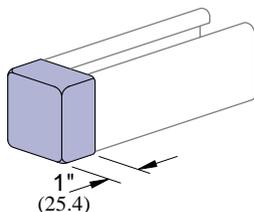
Material: .075" (1.9)

Part Number	Use With Channel	Weight/C	
		Lbs	kg
<b>P1280 A</b>	P1000	11	5.0
<b>P2280 A</b>	P2000	11	5.0

Part Number	Use With Channel	Weight/C	
		Lbs	kg
<b>P1180</b>	P1100	12	5.4
<b>P4280</b>	P4000	5	2.3
<b>P5280</b>	P5000	22	10.0
<b>P5580</b>	P5500	17	7.7

## PLASTIC WHITE END CAPS

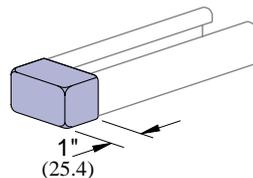
**P2860-10**



Use with P1000, P1100, P2000 channels & P9000 Telestrut.

Wt/C 3.4 Lbs (1.5 kg)

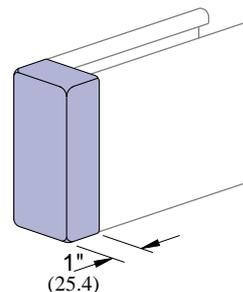
**P2860-33**



Use with P3300 channel.

Wt/C 2.5 Lbs (1.1 kg)

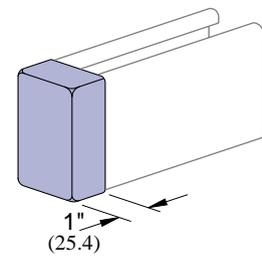
**P2860-50**



Use with P5000 & P1001 channels.

Wt/C 5 Lbs (2.3 kg)

**P2860-55**



Use with P5500 channel.

Wt/C 4.7 Lbs (2.1 kg)

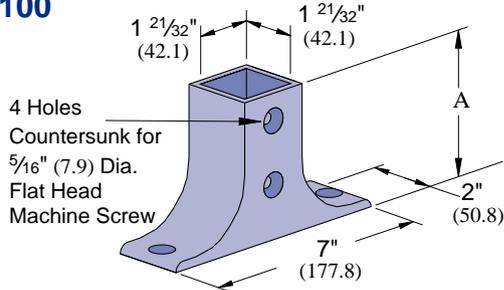
# PARTITION AND DISPLAY FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



**K2099**  
**K2100**

## PARTITION BASE PLATE

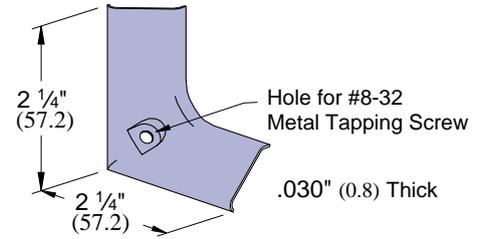


Material: Cast iron.

Part Number	Dimension "A"		Weight/C	
	In	mm	Lbs	kg
<b>K2099</b>	4	101.6	250	113.4
<b>K2100</b>	6 3/4	171.5	500	226.8

**P2571**  
**P2573**  
**P2575**

## CORNER COVER



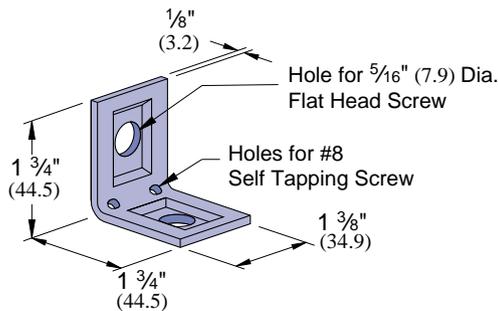
Finish: Electro-galvanized and stainless steel.

Patent Number 3075621

Part Number	Panel Thickness		Weight/C	
	In	mm	Lbs	kg
<b>P2571</b>	1/4	6.4	4	1.8
<b>P2573</b>	3/8	9.5	4	1.8
<b>P2575</b>	1/2	12.7	4	1.8

**P2582**

## CORNER ANGLE



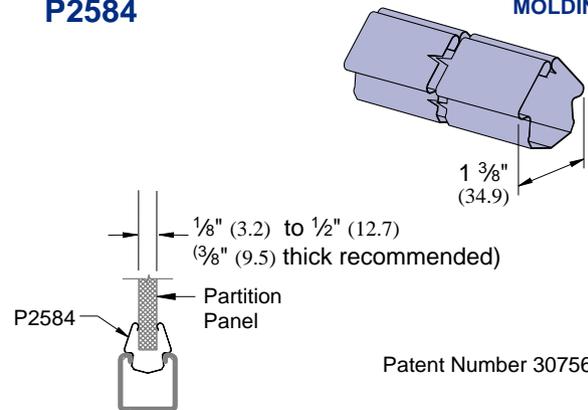
Finish: Electro-galvanized.

Patent Number 3075621

Wt/C 15 Lbs (6.8 kg)

**P2584**

## MOLDING



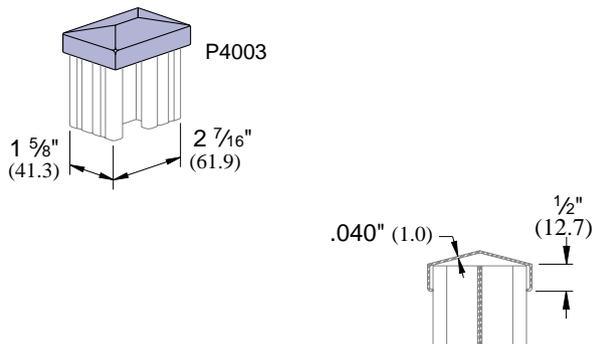
Finish: Stainless steel and zinc bonderized.

Standard lengths of 12' (3.7 m) and 14' (4.3 m).

Wt/C/Ft 20 Lbs (29.8 kg/100 m)

**P2661**

## POST CAP

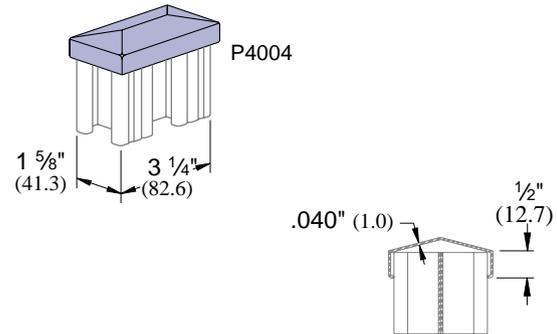


Finish: Electro-galvanized.

Wt/C 15 Lbs (6.8 kg)

**P2662**

## POST CAP



Finish: Electro-galvanized.

Wt/C 17 Lbs (7.7 kg)

# PIPE/CONDUIT CLAMPS, SUPPORTS AND HANGERS

FOR 1 $\frac{5}{8}$ " (41 MM) WIDTH SERIES CHANNEL



	Page
Pipe/Conduit Clamps	129
Pipe Hangers	139
Pipe Rollers	140
Pipe Brackets	143
Reference Tables	144



## MATERIAL

Unistrut pipe supports, unless noted, are punch-press made from hot-rolled, pickled and oiled steel plates, strip or coil, and conform to ASTM specifications A366, A575, A576, A635, or A36. The fitting steel also meets the physical requirements of ASTM A570 GR 33. The pickling of the steel produces a smooth surface free from scale.

Many items are also available in stainless steel. Consult factory for ordering information.

## FINISHES

Pipe supports are available in: electro-galvanized (EG), conforming to ASTM B633 Type III SC1; Hot-

dipped galvanized (HG), conforming to ASTM A123 or A153; Perma-Green II (GR), and plain (PL).

## APPLICATION

Unistrut pipe clamps, pipe hangers, brackets and rollers are designed for the support of electrical and mechanical services. Supports to meet nearly every requirement can be attained using Unistrut Metal Framing components.

## DIMENSIONS

Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

## DESIGN BOLT TORQUE

BOLT SIZE	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
FOOT LBS.	6	11	19	50	100	125
N·m	8	15	25	70	135	170

Note: When tightening 1/4" screws used with a two piece pipe clamp, a torque of 5 foot pounds (60 inch-pounds) should be used.

## DESIGN LOAD

Design load data, where shown, is based on the ultimate strength of the connection with a safety factor of 5.0, unless otherwise noted.

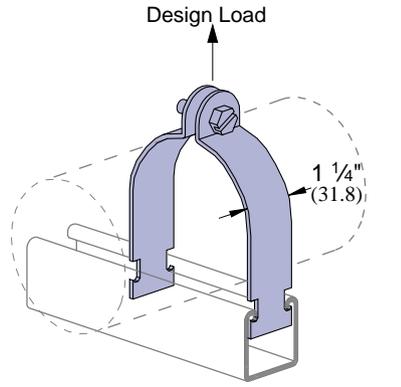
# PIPE/CONDUIT CLAMPS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## P1109 thru P1126

### PIPE CLAMPS FOR RIGID STEEL CONDUIT



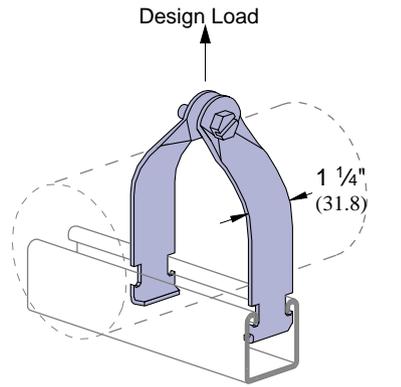
Slotted hex head screw and nut included.

Finish: Electro-galvanized.

Part Number	Pipe Size	O.D. Size		Thickness		Weight/C		Design Load	
		In	mm	Gage	mm	Lbs	kg	Lbs	kN
P1109	3/8	.675	17.1	16	1.5	10	4.5	400	1.8
P1111	1/2	.840	21.3	16	1.5	11	5.0	400	1.8
P1112	3/4	1.050	26.7	14	1.9	15	6.8	600	2.7
P1113	1	1.315	33.4	14	1.9	17	7.7	600	2.7
P1114	1¼	1.660	42.2	14	1.9	19	8.6	600	2.7
P1115	1½	1.900	48.3	12	2.7	29	13.2	800	3.6
P1117	2	2.375	60.3	12	2.7	34	15.4	800	3.6
P1118	2½	2.875	73.0	12	2.7	40	18.1	800	3.6
P1119	3	3.500	88.9	12	2.7	47	21.3	800	3.6
P1120	3½	4.000	101.6	11	3.0	62	28.1	1000	4.4
P1121	4	4.500	114.3	11	3.0	67	30.4	1000	4.4
P1123	5	5.563	141.3	11	3.0	80	36.3	1000	4.4
P1124	6	6.625	168.3	10	3.4	102	46.3	1000	4.4
P1126	8	8.625	219.1	10	3.4	130	59.0	1000	4.4

## P1211 thru P1217

### UNIVERSAL CLAMPS FOR RIGID OR THINWALL CONDUIT



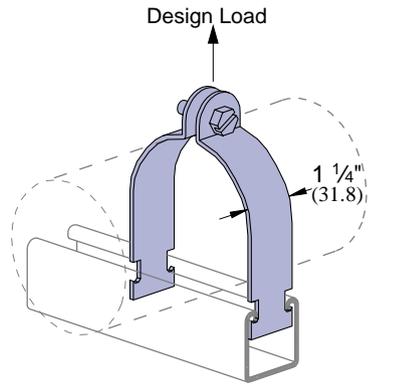
Slotted hex head screw and nut included.

Finish: Electro-galvanized.

Part Number	Pipe/Conduit Size	Thickness		Weight/C		Design Load	
	In	Gage	mm	Lbs	kg	Lbs	kN
P1211	1/2	16	1.5	10	4.5	400	1.8
P1212	3/4	16	1.5	11	5.0	400	1.8
P1213	1	16	1.5	12	5.4	400	1.8
P1214	1¼	14	1.9	18	8.2	600	2.7
P1215	1½	14	1.9	20	9.1	600	2.7
P1217	2	14	1.9	22	10.0	600	2.7

## P1425 thru P1431

### PIPE CLAMPS FOR THIN WALL CONDUIT (E.M.T.)



Slotted hex head screw and nut included.

Finish: Electro-galvanized.

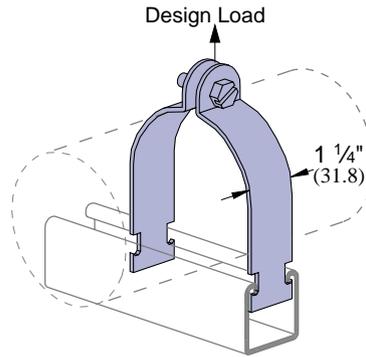
Part Number	Pipe Size	O.D. Size		Thickness		Weight/C		Design Load	
		In	mm	Gage	mm	Lbs	kg	Lbs	kN
P1425	3/8	.577	14.7	16	1.5	9	4.1	400	1.8
P1426	1/2	.706	17.9	16	1.5	11	5.0	400	1.8
P1427	3/4	.922	23.4	16	1.5	12	5.4	400	1.8
P1428	1	1.163	29.5	14	1.9	15	6.8	600	2.7
P1429	1¼	1.510	38.4	14	1.9	18	8.2	600	2.7
P1430	1½	1.740	44.2	12	2.7	29	13.2	800	3.6
P1431	2	2.197	55.8	12	2.7	33	15.0	800	3.6
P1118	2½	2.875	73.0	12	2.7	40	18.1	800	3.6
P1119	3	3.500	88.9	12	2.7	47	21.3	800	3.6
P1120	3½	4.000	101.6	11	3.0	62	28.1	1000	4.4
P1121	4	4.500	114.3	11	3.0	67	30.4	1000	4.4

# PIPE/CONDUIT CLAMPS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P2024 thru P2070-84



## PIPE CLAMPS FOR O.D. TUBING

Slotted hex head screw and nut included.

Finish: Electro-galvanized.

P2024 - P2029 16 ga.  
 P2030 - P2035 14 ga.  
 P2037 - P2052 12 ga.  
 P2053 - P2066 11 ga.  
 P2067 - P2070-84 10 ga.

Part Number	O.D. Size		Weight/C		Design Load Lbs (kN)
	In	mm	Lbs	kg	
P2024	1/4	6.4	8	3.6	400 (1.8)
P2025	3/8	9.5	8	3.6	
P2026	1/2	12.7	9	4.1	
P2027	5/8	15.9	10	4.5	
P2028	3/4	19.1	11	5.0	
P2029	7/8	22.2	12	5.4	
P2030	1	25.4	14	6.4	600 (2.7)
P2031	1 1/8	28.6	15	6.8	
P2032	1 1/4	31.8	16	7.3	
P2033	1 3/8	34.9	17	7.7	
P2034	1 1/2	38.1	18	8.2	
P2035	1 5/8	41.3	19	8.6	
P1430	1 3/4	44.5	29	13.2	800 (3.6)
P2037	1 7/8	47.6	28	12.7	
P2038	2	50.8	31	14.1	
P2039	2 1/8	54.0	32	14.5	
P2040	2 1/4	57.2	33	15.0	
P1117	2 3/8	60.3	34	15.4	
P2042	2 1/2	63.5	35	15.9	
P2043	2 5/8	66.7	37	16.8	
P2044	2 3/4	69.9	38	17.2	
P1118	2 7/8	73.0	40	18.1	
P2046	3	76.2	41	18.6	
P2047	3 1/8	79.4	43	19.5	
P2048	3 1/4	82.6	45	20.4	
P2049	3 3/8	85.7	46	20.9	
P1119	3 1/2	88.9	47	21.3	
P2051	3 5/8	92.1	56	25.4	
P2052	3 3/4	95.3	58	26.3	
P2053	3 7/8	98.4	60	27.2	
P1120	4	101.6	62	28.1	
P2055	4 1/8	104.8	62	28.1	
P2056	4 1/4	108.0	64	29.0	
P2057	4 3/8	111.1	66	29.9	

Part Number	O.D. Size		Weight/C		Design Load Lbs (kN)
	In	mm	Lbs	kg	
P1121	4 1/2	114.3	67	30.4	1000 (4.4)
P2059	4 5/8	117.5	70	31.8	
P2060	4 3/4	120.7	72	32.7	
P2061	4 7/8	123.8	73	33.1	
P2062	5	127.0	74	33.6	
P2063	5 1/8	130.2	76	34.5	
P2064	5 1/4	133.4	77	34.9	
P2065	5 3/8	136.5	78	35.4	
P2066	5 1/2	139.7	79	35.8	
P2067	5 5/8	142.9	88	39.9	
P2068	5 3/4	146.1	90	40.8	
P2069	5 7/8	149.2	92	41.7	
P2070	6	152.4	94	42.6	
P2070-61	6 1/8	155.6	96	43.5	
P2070-62	6 1/4	158.8	98	44.5	
P2070-63	6 3/8	161.9	99	44.9	
P2070-64	6 1/2	165.1	100	45.4	
P1124	6 5/8	168.3	102	46.3	
P2070-66	6 3/4	171.5	104	47.2	
P2070-67	6 7/8	174.6	106	48.1	
P2070-70	7	177.8	108	49.0	
P2070-71	7 1/8	181.0	110	49.9	
P2070-72	7 1/4	184.2	112	50.8	
P2070-73	7 3/8	187.3	114	51.7	
P2070-74	7 1/2	190.5	116	52.6	
P2070-75	7 5/8	193.7	117	53.1	
P2070-76	7 3/4	196.9	119	54.0	
P2070-77	7 7/8	200.0	121	54.9	
P2070-80	8	203.2	123	55.8	
P2070-81	8 1/8	206.4	125	56.7	
P2070-82	8 1/4	209.6	126	57.2	
P2070-83	8 3/8	212.7	128	58.1	
P2070-84	8 1/2	215.9	129	58.5	
P1126	8 5/8	219.1	130	59.0	

## PIPE CLAMPS IN SPECIAL MATERIALS

P1109, P1211, P1425, P2024 SERIES

Material	Add Suffix To "P" Number	Example
Steel Strap, Everdur Hardware	E	P1109 E
Copper Coated Steel Strap & Hardware	CC	P1109 CC
Aluminum	AL	P1109 AL
Stainless Steel 304 or 316	SS or ST	P1109 SS
Plastic Coated Steel Straps	PC	P1109 PC

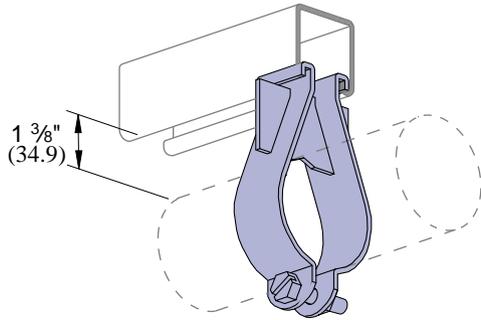
# PIPE/CONDUIT CLAMPS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P1563 thru P1573

## PARALLEL CLAMPS FOR RIGID CONDUIT AND PIPE



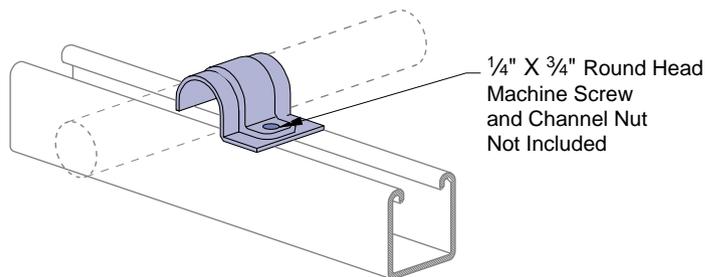
Slotted hex head screw and nut included.

Finish: Electro-galvanized.

Part Number	Pipe Size	O.D. Size		Thickness		Weight/C	
	In	In	mm	Gage	mm	Lbs	kg
<b>P1563</b>	3/8	.675	17.1	14	1.9	27	12.2
<b>P1564</b>	1/2	.840	21.3	14	1.9	29	13.2
<b>P1565</b>	3/4	1.050	26.7	14	1.9	30	13.6
<b>P1566</b>	1	1.315	33.4	14	1.9	31	14.1
<b>P1567</b>	1 1/4	1.660	42.2	14	1.9	38	17.2
<b>P1568</b>	1 1/2	1.900	48.3	12	2.7	40	18.1
<b>P1569</b>	2	2.375	60.3	12	2.7	47	21.3
<b>P1570</b>	2 1/2	2.875	73.0	12	2.7	66	29.9
<b>P1571</b>	3	3.500	88.9	12	2.7	78	35.4
<b>P1572</b>	3 1/2	4.000	101.6	12	2.7	87	39.5
<b>P1573</b>	4	4.500	114.3	12	2.7	90	40.8

## P2008 thru P2020

## ONE HOLE CLAMP FOR O.D. TUBING



Finish: Electro-galvanized.

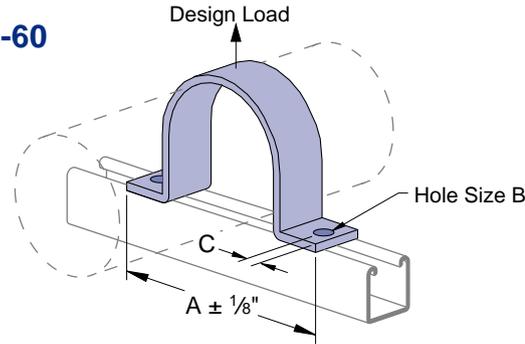
Part Number	O.D. Tube Size		Thickness		Weight/C	
	In	mm	Gage	mm	Lbs	kg
<b>P2008</b>	1/4	6.4	16	1.5	4	1.8
<b>P2009</b>	5/16	7.9	16	1.5	5	2.3
<b>P2010</b>	3/8	9.5	16	1.5	5	2.3
<b>P2012</b>	1/2	12.7	16	1.5	6	2.7
<b>P2014</b>	5/8	15.9	14	1.9	8	3.6
<b>P2016</b>	3/4	19.1	14	1.9	9	4.1
<b>P2018</b>	7/8	22.2	14	1.9	10	4.5
<b>P2020</b>	1	25.4	14	1.9	11	5.0

# PIPE/CONDUIT CLAMPS

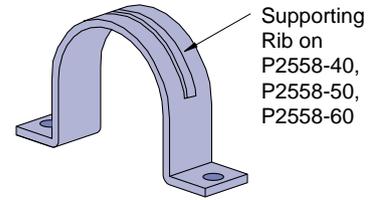
FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P2558-5 thru P2558-60



## SINGLE PIECE PIPE STRAP

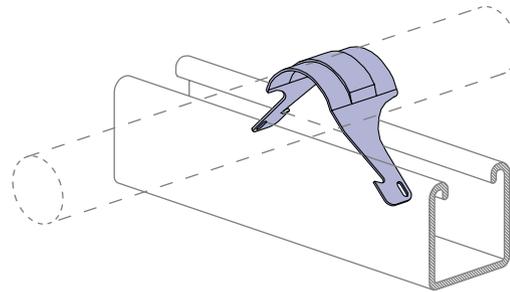


Hardware sold separately.

Part Number	Nominal Pipe Size	"A"		"B"		"C"		Thickness In (mm)	Weight/C		Design Load Lbs (kN)
		In	mm	In	mm	In	mm		Lbs	kg	
P2558-05	1/2	27/8	73.0					1/8" (3.2)	23	10.4	500 (2.2)
P2558-07	3/4	3 1/8	79.4						26	11.8	
P2558-10	1	3 3/8	85.7	9/32	7.1	7/16	11.1		31	14.1	
P2558-12	1 1/4	3 3/4	95.3						35	15.9	
P2558-15	1 1/2	3 7/8	98.4						39	17.7	
P2558-20	2	5 3/4	146.1					1/4" (6.4)	94	42.6	1000 (4.4)
P2558-25	2 1/2	6 1/4	158.8						114	51.7	
P2558-30	3	6 7/8	174.6						133	60.3	
P2558-35	3 1/2	7 3/8	187.3	7/16	11.1	1 1/16	17.5		152	68.9	
P2558-40	4	7 7/8	200.0						176	79.8	
P2558-50	5	9	228.6						198	89.8	
P2558-60	6	10	254.0						225	102.1	

## P2609 thru P2617 P2426 thru P2431

## UNI-CLIP SUPPORT



The Uni-Clip supports exceed load requirements for American Standard Code for Pressure Piping (1967), and National Electric Code (1971). Patent No. 2863625.

Material: Stainless steel type 301.

### UNI-CLIP SUPPORTS FOR RIGID STEEL CONDUIT

Part Number	Conduit Size In	O.D. Size		Weight/C	
		In	mm	Lbs	kg
P2609	3/8	.675	17.1	1.6	0.7
P2611	1/2	.840	21.3	2.3	1.0
P2612	3/4	1.050	26.7	3.2	1.5
P2613	1	1.315	33.4	4.1	1.9
P2614	1 1/4	1.660	42.2	5.1	2.3
P2615	1 1/2	1.900	48.3	6.3	2.9
P2617	2	2.375	60.3	10.0	4.5

### UNI-CLIP SUPPORTS FOR THINWALL CONDUIT (E.M.T.)

Part Number	Conduit Size In	O.D. Size		Weight/C	
		In	mm	Lbs	kg
P2426	1/2	.706	17.9	1.7	0.8
P2427	3/4	.922	23.4	2.4	1.1
P2428	1	1.163	29.5	3.6	1.6
P2429	1 1/4	1.510	38.4	4.6	2.1
P2430	1 1/2	1.740	44.2	5.9	2.7
P2431	2	2.197	55.8	8.0	3.6

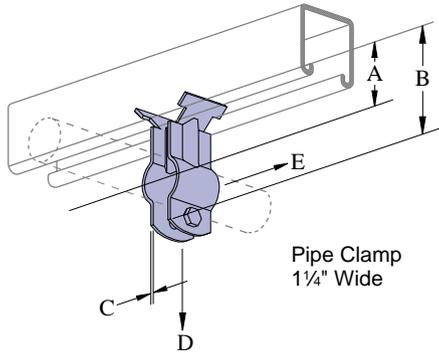
# PIPE/CONDUIT CLAMPS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P3409 thru P3417

## STAND-OFF PIPE CLAMPS



Hardware included.

Finish: Electro-galvanized.

Patent No. 3417951.

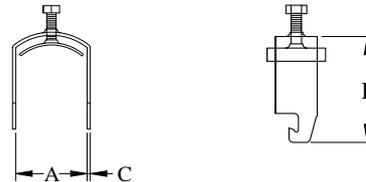
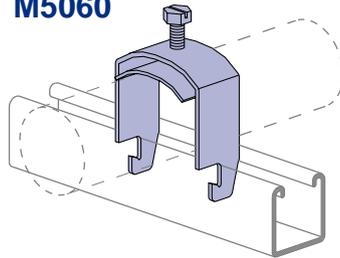
Safety factor of 5

Part Number	Load "D"		Load "E"	
	Lbs	kN	Lbs	kN
<b>P3409</b>	100	0.4	25	0.1
<b>P3411</b>	150	0.7	35	0.2
<b>P3412</b>	175	0.8	40	0.2
<b>P3413</b>	200	0.9	50	0.2
<b>P3414</b>	300	1.3	70	0.3
<b>P3415</b>	400	1.8	80	0.4
<b>P3417</b>	500	2.2	120	0.5

Part Number	Pipe Size In	O.D. Size		"A"		"B"		"C"		Weight/C	
		In	mm	In	mm	In	mm	Gage	mm	Lbs	kg
<b>P3409</b>	3/8	.675	17.1	1 1/8	28.6	2 1/8	54.0	14	1.9	14	6.4
<b>P3411</b>	1/2	.840	21.3	1 1/4	31.8	2 5/16	58.7	14	1.9	15	6.8
<b>P3412</b>	3/4	1.050	26.7	1 5/16	33.3	2 1/2	63.5	14	1.9	19	8.6
<b>P3413</b>	1	1.315	33.4	1 1/2	38.1	2 3/4	69.9	14	1.9	22	10.0
<b>P3414</b>	1 1/4	1.660	42.2	1 11/16	42.9	3 1/4	82.6	12	2.7	34	15.4
<b>P3415</b>	1 1/2	1.900	48.3	1 3/4	44.5	3 1/2	88.9	11	3.2	49	22.2
<b>P3417</b>	2	2.375	60.3	2	50.8	4	101.6	10	3.4	55	24.9

## M5025 thru M5060

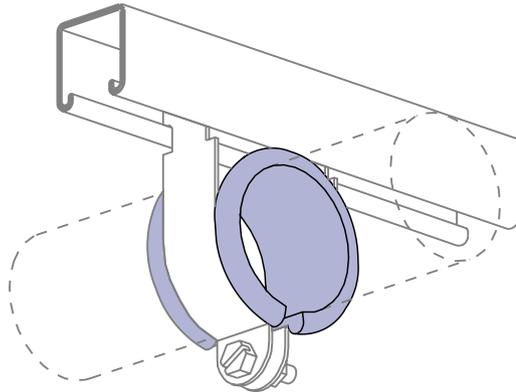
## ONE-PIECE CABLE & CONDUIT CLAMPS



Finish: Electro-galvanized.

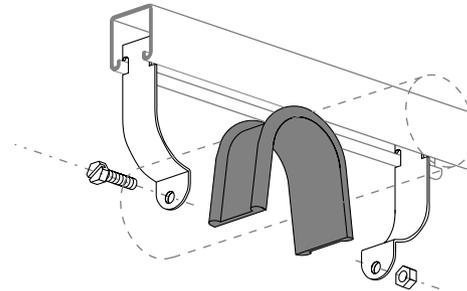
Part Number	Max O.D. Size		"A"		"B"		"C"		Weight/C	
	In	mm	In	mm	In	mm	Gage	mm	Lbs	kg
<b>M5025</b>	3/8	9.5	7/16	11.1	1 5/8	41.3	14	1.9	6	2.7
<b>M5026</b>	1/2	12.7	9/16	14.3	1 3/4	44.5	14	1.9	7	3.2
<b>M5028</b>	3/4	19.1	13/16	20.6	2	50.8	14	1.9	12	5.4
<b>M5030</b>	1	25.4	1 1/16	27.0	2 1/4	57.2	14	1.9	15	6.8
<b>M5032</b>	1 1/4	31.8	1 5/16	33.3	2 1/2	63.5	14	1.9	19	8.6
<b>M5034</b>	1 1/2	38.1	1 9/16	39.7	2 3/4	69.9	14	2.7	20	9.1
<b>M5036</b>	1 3/4	44.5	1 13/16	46.0	3	76.2	12	2.7	25	11.3
<b>M5038</b>	2	50.8	2 1/16	52.4	3 1/4	82.6	12	2.7	35	15.9
<b>M5041</b>	2 3/8	60.3	2 7/16	61.9	3 5/8	92.1	12	2.7	41	18.6
<b>M5044</b>	2 3/4	69.9	2 13/16	71.4	4	101.6	12	2.7	60	27.2
<b>M5048</b>	3 1/4	82.6	3 5/16	84.1	4 1/2	114.3	12	2.7	74	33.6
<b>M5052</b>	3 3/4	95.3	3 13/16	96.8	5	127.0	12	2.7	91	41.3
<b>M5054</b>	4	101.6	4 1/16	103.2	5 1/4	133.4	12	2.7	100	45.4
<b>M5057</b>	4 3/8	111.1	4 7/16	112.7	5 5/8	142.9	12	2.7	115	52.2
<b>M5060</b>	4 3/4	120.7	4 13/16	122.2	6	152.4	12	2.7	125	56.7

**P2600**



Wt/Carton 2.5 Lbs (1.1 kg)

**UNICUSHION®: ISOLATION MATERIAL**



- 25 feet per carton.
- Cut to length as shown in charts.

**CLAMP SELECTION & CUTTING GUIDE**

**EMT CONDUIT**

Nominal Size	Use with Clamp	Unicushion Length	
		In	mm
3/8"	P1426	1¾	44
1/2"	P1111	2⅞	54
3/4"	P1112	2¾	70
1"	P2032	3⅝	92
1¼"	P2035	4¾	120
1½"	P2037	5½	140
2"	P1117	6¾	171

**UNICUSHION FEATURES**

- Shock absorption
- Protection from corrosion and abrasion
- Allowance for expansion and contraction
- Sound and vibration isolation
- Stability in use from - 50° F (-47° C) to + 350°F (+177° C)
- Flexible elastomer material
- Will not support combustion

**STANDARD PIPE OR RIGID CONDUIT**

Nominal Size	Use with Clamp	Unicushion Length	
		In	mm
3/8"	P1111	2⅞	54
1/2"	P2030	3	76
3/4"	P2031	3¼	83
1"	P2034	4¼	108
1¼"	P2037	5¼	133
1½"	P2038	6	152
2"	P2042	7½	190
2½"	P2046	9	228
3"	P2051	11	280
3½"	P2055	12¼	310
4"	P2059	14	355
5"	P2067	17½	445
6"	P2070-66	20¾	527

**COPPER TUBING TYPE K OR L**

Nominal Size	Use with Clamp	Unicushion Length	
		In	mm
¼"	P2026	1⅙	27
3/8"	P2027	1½	38
½"	P2028	2⅞	54
5/8"	P2029	2¼	57
¾"	P2030	3	76
1"	P2032	3⅝	92
1¼"	P2034	4½	114
1½"	P1430	5¼	133
2"	P2040	6¾	171
2½"	P2044	8¼	210
3"	P2048	10	254
3½"	P2052	11¼	286
4"	P2056	12½	318
5"	P2064	16	406
6"	P2070-62	19	483
8"	P2070-82	25	635

### CLAMP SELECTION & CUTTING GUIDE

#### O. D. TUBE

O. D. Size		Use With Clamp	Unicushion Length	
In	mm		In	mm
1/4	6.4	P2025	7/8	22
3/8	9.5	P2026	1 1/16	27
1/2	12.7	P2027	1 1/2	38
5/8	15.9	P2028	2 1/8	54
3/4	19.1	P2029	2 1/4	57
7/8	22.2	P2030	3	76
1	25.4	P2031	3 1/4	83
1 1/8	28.6	P2032	3 5/8	92
1 1/4	31.8	P2033	4	101
1 3/8	34.9	P2034	4 1/2	114
1 1/2	38.1	P2035	4 7/8	124
1 5/8	41.3	P1430	5 1/4	133
1 3/4	44.5	P2037	5 1/2	140
1 7/8	47.6	P2038	6	152
2	50.8	P2039	6 1/2	165
2 1/8	54.0	P2040	6 3/4	171
2 1/4	57.2	P1117	7 1/4	184
2 3/8	60.3	P2042	7 1/2	190
2 1/2	63.5	P2043	8	203
2 5/8	66.7	P2044	8 1/4	209
2 3/4	69.9	P1118	8 3/4	222
2 7/8	73.0	P2046	9 1/4	235
3	76.2	P2047	9 1/2	241
3 1/8	79.4	P2048	10	254
3 1/4	82.6	P2049	10 1/2	267
3 3/8	85.7	P1119	10 3/4	273
3 1/2	88.9	P2051	11	280
3 5/8	92.1	P2052	11 1/4	286
3 3/4	95.3	P2053	11 1/2	292
3 7/8	98.4	P1120	11 3/4	298
4	101.6	P2055	12	305
4 1/8	104.8	P2056	12 1/2	318
4 1/4	108.0	P2057	13	330
4 3/8	111.1	P1121	13 1/2	343

#### O. D. TUBE

O. D. Size		Use With Clamp	Unicushion Length	
In	mm		In	mm
4 1/2	114.3	P2059	14	355
4 5/8	117.5	P2060	14 1/4	362
4 3/4	120.7	P2061	14 3/4	375
4 7/8	123.8	P2062	15	381
5	127.0	P2063	15 1/2	394
5 1/8	130.2	P2064	16	406
5 1/4	133.4	P2065	16 1/4	413
5 3/8	136.5	P2066	16 1/2	419
5 1/2	139.7	P2067	17	432
5 5/8	142.9	P2068	17 1/2	445
5 3/4	146.1	P2069	17 3/4	451
5 7/8	149.2	P2070	18 1/4	464
6	152.4	P2070-61	18 1/2	470
6 1/8	155.0	P2070-62	19	483
6 1/4	158.8	P2070-63	19 1/4	489
6 3/8	168.9	P2070-64	19 3/4	502
6 1/2	165.1	P1124	20	508
6 5/8	168.3	P2070-66	20 1/2	521
6 3/4	171.5	P2070-67	21	533
6 7/8	174.6	P2070-70	21 1/4	540
7	177.8	P2070-71	21 3/4	552
7 1/8	181.0	P2070-72	22	559
7 1/4	184.2	P2070-73	22 1/2	572
7 3/8	187.3	P2070-74	22 3/4	578
7 1/2	190.5	P2070-75	23 1/4	591
7 5/8	193.7	P2070-76	23 1/2	597
7 3/4	196.9	P2070-77	24	610
7 7/8	200.0	P2070-80	24 1/2	622
8	203.2	P2070-81	24 3/4	629
8 1/8	206.4	P2070-82	25	635
8 1/4	209.6	P2070-83	25 1/2	648
8 3/8	215.9	P2070-84	26	660
8 1/2	219.1	P1126	26 1/4	667

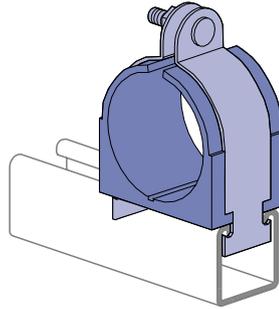
# PIPE/TUBING CLAMPS

FOR 1<sup>5</sup>/<sub>8</sub>" (41 MM) WIDTH SERIES CHANNEL

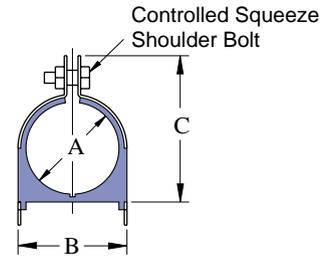


**004T008 thru 098N106**  
**009N012 thru 106N114**

Includes cushion,  
clamp and hardware.



**CUSH-A-CLAMP® ASSEMBLY**



Materials:  
Clamp: Electro-galvanized or stainless steel.  
Cushion: Thermoplastic elastomer.

TUBE SERIES			PIPE SERIES		DIMENSIONS							
Assembly Part Number	Copper & Steel Tube O. D. Size	Copper Water Pipe (Nominal)	Assembly Part Number	Nominal Pipe Size	"A"		"B"		"C"		Weight/C	
					In	mm	In	mm	In	mm	Lbs	kg
004T008	1/4				.25	6.4	.62	15.7	.98	24.9	10	4.5
006T010	3/8	1/4			.37	9.4	.82	20.8	1.13	28.7	11	5.0
008T012	1/2	3/8			.50	12.7	.94	23.9	1.34	34.0	13	5.9
			009N012	1/4	.54	13.7	.98	24.9	1.34	34.0	13	5.9
010T014	5/8	1/2			.62	15.7	1.06	26.9	1.54	39.1	14	6.4
			011N014	3/8	.67	17.0	1.13	28.7	1.54	39.1	14	6.4
012T016	3/4	5/8			.75	19.1	1.20	30.5	1.68	42.7	14	6.4
			014N018	1/2	.84	21.3	1.29	32.8	1.82	46.2	15	6.8
014T018	7/8	3/4			.87	22.1	1.31	33.3	1.82	46.2	15	6.8
016T020	1				1.00	25.4	1.44	36.6	1.95	49.5	17	7.7
			017N022	3/4	1.05	26.7	1.50	38.1	1.95	49.5	17	7.7
018T022	1 1/8	1			1.12	28.4	1.57	39.9	2.08	52.8	18	8.2
020T024	1 1/4				1.25	31.8	1.70	43.2	2.21	56.1	18	8.2
			021N026	1	1.31	33.3	1.76	44.7	2.34	59.4	19	8.6
022T026	1 3/8	1 1/4			1.37	34.8	1.82	46.2	2.34	59.4	20	9.1
024N028	1 1/2				1.50	38.4	1.95	49.5	2.47	62.7	33	15.0
026N030	1 5/8	1 1/2			1.62	41.1	2.07	52.6	2.60	66.0	35	15.9
			027N032	1 1/4	1.66	42.2	2.17	55.1	2.73	69.3	35	15.9
028N032	1 3/4				1.75	44.5	2.20	55.9	2.73	69.3	37	16.8
030N034	1 7/8				1.87	47.5	2.32	58.9	2.86	72.6	39	17.7
			030N034	1 1/2	1.90	48.5	2.35	59.7	2.86	72.6	41	18.6
032N036	2				2.00	50.8	2.45	62.2	3.04	77.2	46	20.9
034N040	2 1/8				2.12	53.8	2.57	65.3	3.23	82.0	47	21.3
038N044	2 3/8		038N044	2	2.37	60.2	2.82	71.6	3.67	93.2	49	22.2
040N046	2 1/2				2.50	63.5	2.94	74.7	3.79	96.3	51	23.1
042N048	2 5/8				2.62	66.5	3.07	78.0	3.92	99.6	55	24.9
046N052	2 7/8		046N052	2 1/2	2.87	72.9	3.32	84.3	4.17	105.9	57	25.9
050N056	3 1/8				3.12	79.2	3.57	90.7	4.42	112.3	60	27.2
056N062	3 1/2		056N062	3	3.50	88.9	3.95	100.3	4.79	121.7	55	24.9
058N064	3 5/8				3.62	91.9	4.20	106.7	4.99	126.7	70	31.8
064N072	4		064N072	3 1/2	4.00	101.6	4.45	113.0	5.42	137.7	88	39.9
066N074	4 1/8				4.12	104.6	4.57	116.1	5.54	140.7	94	42.6
072N080	4 1/2		072N080	4	4.50	114.3	4.95	125.3	5.92	150.4	110	49.9
082N090	5 1/8				5.12	130.0	5.57	141.5	6.54	166.1	125	56.7
			089N096	5	5.56	141.2	6.01	152.7	6.92	175.8	130	59.0
098N106	6 1/8				6.12	155.4	6.57	166.9	7.54	191.5	130	59.0
			106N114	6	6.62	168.1	7.07	179.6	8.23	209.0	140	63.5

Part Numbers are "coded" to designate cushion size and clamp size.

Patent Numbers: 4,516,296; 4,934,635

Examples: **004T008** 004 - Cushion Size 1/16" (6.4)  
 T - With Controlled Squeeze Shoulder Bolt  
 008 - Clamp Size 3/16" (12.7)

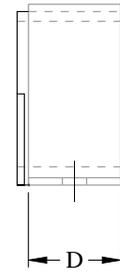
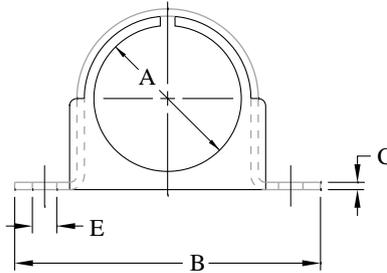
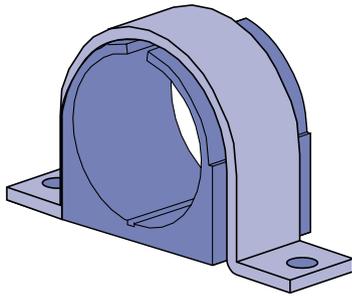
**009N012** 009 - Cushion Size 3/16" (14.3)  
 N - With Standard Bolt  
 012 - Clamp Size 1/2" (19.1)

# PIPE/TUBING CLAMPS



004M007 thru 034M040

CUSH-A-CLAMP® ASSEMBLY  
OMEGA SERIES



Includes clamp and cushion.

Materials: Clamp: Electro-chromate or stainless steel.  
Cushion: Thermoplastic elastomer.

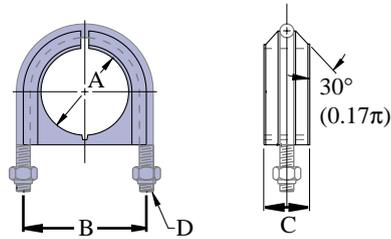
Patent Pending.

Part Number	Copper & Steel Tubing O. D.	Copper Water Pipe (Nominal)	Pipe Size (Nominal)	Dimensions										Weight/C	
				"A"		"B"		"C"		"D"		"E"			
				In	mm	In	mm	In	mm	In	mm	In	mm	Lbs	Kg
004M007	1/4			.25	6.4	1.81	46.0	.06	1.5	.62	15.7	.20	5.1	3.4	1.5
006M008	3/8	1/4		.37	9.4	1.90	48.3	.06	1.5	.62	15.7	.20	5.1	4	1.8
008M011	1/2	3/8	1/4	.50	12.7	2.20	55.9	.06	1.5	.75	19.1	.26	6.6	5.5	2.5
010M013	5/8	1/2	3/8	.62	15.7	2.32	58.9	.06	1.5	.75	19.1	.26	6.6	6	2.7
012M015	3/4	5/8		.75	19.1	2.41	61.2	.06	1.5	.75	19.1	.26	6.6	6.5	2.9
014M017	7/8	3/4	1/2	.87	22.1	2.56	65.0	.06	1.5	.75	19.1	.26	6.6	7.1	3.2
016M019	1			1.00	25.4	2.68	68.1	.06	1.5	.75	19.1	.26	6.6	7.8	3.5
018M020			3/4	1.05	26.7	2.68	68.1	.06	1.5	.75	19.1	.26	6.6	8.1	3.7
018M021	1 1/8	1		1.12	28.4	2.82	71.6	.06	1.5	.75	19.1	.26	6.6	8.4	3.8
020M024	1 1/4			1.25	31.8	3.00	76.2	.08	2.0	1.25	31.8	.26	6.6	17	7.7
021M026			1	1.31	33.3	3.12	79.2	.08	2.0	1.25	31.8	.26	6.6	20	9.1
022M026	1 3/8	1 1/4		1.37	34.8	3.12	79.2	.08	2.0	1.25	31.8	.26	6.6	19	8.6
024M028	1 1/2			1.50	38.1	3.65	92.7	.08	2.0	1.25	31.8	.26	6.6	20	9.1
026M030	1 5/8	1 1/2		1.62	41.1	3.77	95.8	.08	2.0	1.25	31.8	.26	6.6	23	10.4
027M032			1 1/4	1.66	42.2	3.90	99.1	.10	2.5	1.25	31.8	.33	8.4	32	14.5
028M032	1 3/4			1.75	44.5	3.90	99.1	.10	2.5	1.25	31.8	.33	8.4	32	14.5
030M034	1 7/8		1 1/2	1.87	47.5	4.02	102.1	.10	2.5	1.25	31.8	.33	8.4	34	15.4
032M036	2			2.00	50.8	4.15	105.4	.10	2.5	1.25	31.8	.33	8.4	36	16.3
034M040	2 1/8			2.12	53.8	4.40	111.8	.10	2.5	1.25	31.8	.33	8.4	41	18.6
038M044			2	2.37	60.2	4.71	119.6	.10	2.5	1.25	31.8	.33	8.4	44	20.0

Note: Not intended for use with metal framing components.  
Can be mounted to any flat surface.

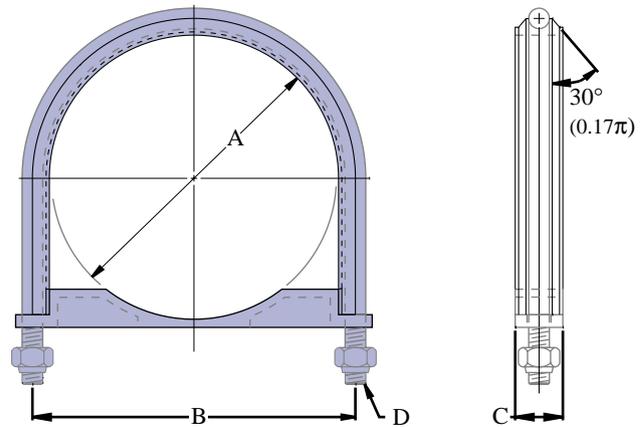
## UB $\frac{1}{2}$ PA thru UB12PA

## CUSH-A-CLAMP® ASSEMBLY U-BOLT SERIES



$\frac{1}{2}$ " thru 6" assembly.

Includes U bolt, cushion,  
and hardware.



8" thru 12" assembly.

### Materials:

U Bolt: Electro-galvanized finish.

Cushion: Thermoplastic elastomer.

Part Number	Pipe Size (Nominal)	Dimensions						
		"A"		"B"		"C"		"D"
		In	mm	In	mm	In	mm	
<b>UB1/2PA</b>	$\frac{1}{2}$	.84	21.3	1.60	40.6	.68	17.3	$\frac{1}{4}$ -20 UNC-2B
<b>UB3/4PA</b>	$\frac{3}{4}$	1.05	26.7	1.80	45.7	.68	17.3	$\frac{1}{4}$ -20 UNC-2B
<b>UB1PA</b>	1	1.31	33.3	2.05	52.1	.68	17.3	$\frac{1}{4}$ -20 UNC-2B
<b>UB1-1/4PA</b>	$1\frac{1}{4}$	1.66	42.2	2.54	64.5	1.24	31.5	$\frac{3}{8}$ -16 UNC-2B
<b>UB1-1/2PA</b>	$1\frac{1}{2}$	1.90	48.3	2.78	70.6	1.24	31.5	$\frac{3}{8}$ -16 UNC-2B
<b>UB2PA</b>	2	2.37	60.2	3.32	84.3	1.24	31.5	$\frac{3}{8}$ -16 UNC-2B
<b>UB2-1/2PA</b>	$2\frac{1}{2}$	2.87	72.9	3.88	98.6	1.24	31.5	$\frac{1}{2}$ -13 UNC-2B
<b>UB3PA</b>	3	3.50	88.9	4.50	114.3	1.24	31.5	$\frac{1}{2}$ -13 UNC-2B
<b>UB3-1/2PA</b>	$3\frac{1}{2}$	4.00	101.6	5.00	127.0	1.24	31.5	$\frac{1}{2}$ -13 UNC-2B
<b>UB4PA</b>	4	4.50	114.3	5.50	139.7	1.24	31.5	$\frac{1}{2}$ -13 UNC-2B
<b>UB5PA</b>	5	5.56	141.2	6.59	167.4	1.24	31.5	$\frac{1}{2}$ -13 UNC-2B
<b>UB6PA</b>	6	6.62	168.1	7.81	198.4	1.44	36.6	$\frac{5}{8}$ -11 UNC-2B
<b>UB8PA</b>	8	8.62	218.9	9.84	249.2	1.44	36.6	$\frac{5}{8}$ -11 UNC-2B
<b>UB10PA</b>	10	10.75	273.1	12.25	311.2	1.65	41.9	$\frac{3}{4}$ -10 UNC-2B
<b>UB12PA</b>	12	12.75	323.9	14.25	362.0	1.65	41.9	$\frac{3}{4}$ -10 UNC-2B

Note: Not intended for use with metal framing components.

# PIPE HANGERS

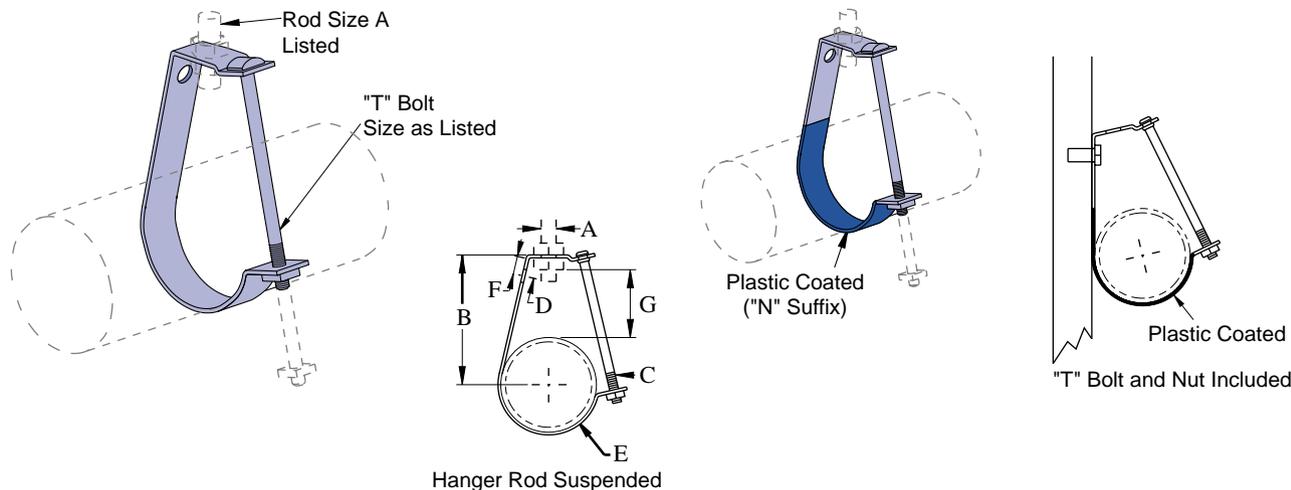
FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## J1205 thru J1280

### J1205 N thru J 1280 N (Plastic Coated)

## "J" CONDUIT AND PIPE HANGER



### IMPERIAL

Part Number	Lbs/C	Part Number	Lbs/C	Pipe Size	"A"	"B"	"C"	"D"	"E"	"F"	"G"	Load Lbs
J1205	20	J1205 N	21	1/2	3/8	1 3/4	1/4 x 2 1/4	1 3/32	1/8 x 3/4	9/16	7/8	300
J1207	21	J1207 N	22	3/4	3/8	1 7/8	1/4 x 2 1/4	1 9/32	1/8 x 3/4	9/16	7/8	300
J1210	24	J1210 N*	25	1	3/8	2 1/4	1/4 x 2 3/4	1 13/32	1/8 x 3/4	9/16	1	300
J1212	27	J1212 N	29	1 1/4	3/8	2 3/4	1/4 x 3 1/4	1 13/32	1/8 x 3/4	9/16	1 3/8	300
J1215	29	J1215 N*	31	1 1/2	3/8	3	1/4 x 3 1/2	1 13/32	1/8 x 3/4	9/16	1 1/2	300
J1220	33	J1220 N*	35	2	3/8	3 3/8	1/4 x 4	1 13/32	1/8 x 3/4	9/16	1 5/8	300
J1225	71	J1225 N	74	2 1/2	1/2	4	3/8 x 4 1/2	9/16	1/8 x 1 1/4	3/4	1 7/8	500
J1230	78	J1230 N*	81	3	1/2	4 1/4	3/8 x 5	9/16	1/8 x 1 1/4	3/4	1 7/8	500
J1235	85	J1235 N	88	3 1/2	1/2	4 3/4	3/8 x 5 1/2	9/16	1/8 x 1 1/4	3/4	2 1/8	500
J1240	178	J1240 N*	182	4	5/8	5 1/2	3/8 x 6 1/2	9/16	1/4 x 1 1/4	3/4	2 1/4	600
J1250	199	J1250 N	203	5	5/8	6	3/8 x 7 1/2	9/16	1/4 x 1 1/4	3/4	2 1/4	600
J1260	231	J1260 N*	236	6	3/4	7	3/8 x 8 1/2	9/16	1/4 x 1 1/4	3/4	2 5/8	600
J1280	449	J1280 N	458	8	7/8	10	3/8 x 12	9/16	1/4 x 2	1	4 5/8	700

### METRIC

Part Number	kg/C	Part Number	kg/C	Pipe Size	"A"	"B"	"C"	"D"	"E"	"F"	"G"	Load kN
J1205	9.1	J1205 N	9.5	1/2	9.5	44.5	1/4 x 2 1/4	10.3	3.2 x 19.1	14.3	22.2	1.3
J1207	9.5	J1207 N	10.0	3/4	9.5	47.6	1/4 x 2 1/4	10.3	3.2 x 19.1	14.3	22.2	1.3
J1210	10.9	J1210 N*	11.3	1	9.5	57.2	1/4 x 2 3/4	10.3	3.2 x 19.1	14.3	25.4	1.3
J1212	12.2	J1212 N	13.2	1 1/4	9.5	69.9	1/4 x 3 1/4	10.3	3.2 x 19.1	14.3	34.9	1.3
J1215	13.2	J1215 N*	14.1	1 1/2	9.5	76.2	1/4 x 3 1/2	10.3	3.2 x 19.1	14.3	38.1	1.3
J1220	15.0	J1220 N*	15.9	2	9.5	85.7	1/4 x 4	10.3	3.2 x 19.1	14.3	41.3	1.3
J1225	32.2	J1225 N	33.6	2 1/2	12.7	101.6	3/8 x 4 1/2	14.3	3.2 x 31.8	19.1	47.6	2.2
J1230	35.4	J1230 N*	36.7	3	12.7	108.0	3/8 x 5	14.3	3.2 x 31.8	19.1	47.6	2.2
J1235	38.6	J1235 N	39.9	3 1/2	12.7	120.7	3/8 x 5 1/2	14.3	3.2 x 31.8	19.1	54.0	2.2
J1240	80.7	J1240 N*	82.6	4	15.9	139.7	3/8 x 6 1/2	14.3	6.4 x 31.8	19.1	57.2	2.7
J1250	90.3	J1250 N	92.1	5	15.9	152.4	3/8 x 7 1/2	14.3	6.4 x 31.8	19.1	57.2	2.7
J1260	104.8	J1260 N*	107.0	6	19.1	177.8	3/8 x 8 1/2	14.3	6.4 x 31.8	19.1	66.7	2.7
J1280	203.7	J1280 N	207.7	8	22.2	254.0	3/8 x 12	14.3	6.4 x 50.8	25.4	117.5	3.12

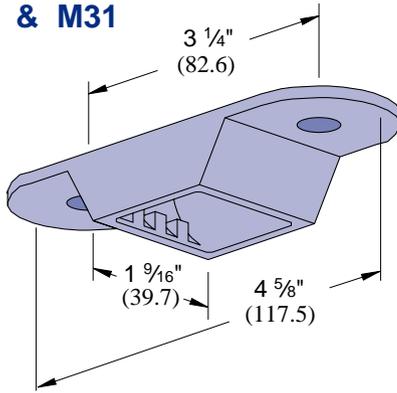
\*Standard glass drainline and glass process pipe sizes.  
Minimum safety factor of five (5) on ultimate load.

# PIPE ROLLERS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



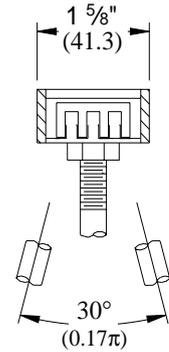
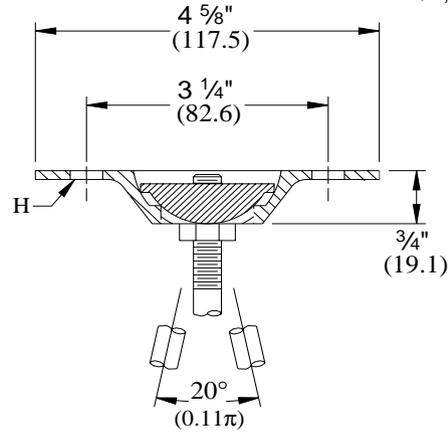
## M30 & M31



For pipe sizes  
3/4" to 2".

## SWIVEL CEILING FLANGES

Supports 3/8", 1/2", 5/8",  
3/4", 7/8" hanger rods.



Material: Malleable Iron.

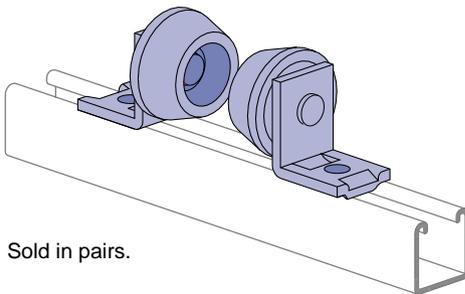
Note: See page 177 for  
swivel nuts.

Wt/C 40 Lbs (18.1 kg)

Part Number	Mounting Bolt Size	Hole "H"		Weight/C		Design Load	
		In	mm	Lbs	kg	Lbs	kN
<b>M30</b>	3/8	7/16	18.1	40	18.1	1220	5.4
<b>M31</b>	1/2	9/16	18.1	40	18.1	1450	6.4

Patent No. 2953874.

## P2474



Sold in pairs.

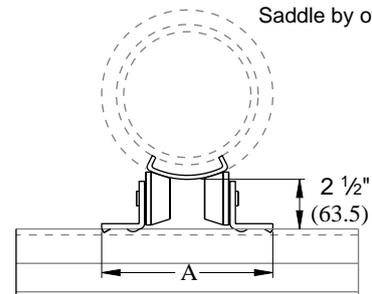
Requires 2 each 1/2" x 15/16" bolts  
and 1/2" channel nuts per  
assembly. Sold separately.

Design Load  
500 Lbs (2.2 kg)

Wt/C 268 Lbs (121.6 kg)

## PIPE ROLLER FOR 1/2" - 4" PIPE

Saddle by others.



Cast iron rollers.

### CHART FOR DIMENSION A

Pipe Size	Insulation Thickness													
	No Insulation		1"	(25.4)	1 1/2"	(38.1)	2"	(50.8)	2 1/2"	(63.5)	3"	(76.2)	4"	(101.6)
In	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
1/2	6 1/2	165	6 1/2	165										
3/4	6 1/2	165	6 1/2	165	6 5/8	168	6 7/8	175						
1	6 1/2	165	6 1/2	165	6 5/8	168	6 7/8	175						
1 1/4	6 1/2	165	6 1/2	165	6 7/8	175	7 1/8	181	7 3/8	187				
1 1/2	6 1/2	165	6 1/2	165	6 7/8	175	7 1/8	181	7 3/8	187				
2	6 1/2	165	6 5/8	168	7 1/8	181	7 3/8	187	7 1/2	191	8	203		
2 1/2	6 1/2	165	6 5/8	168	7 1/8	181	7 3/8	187	7 1/2	191	8	203		
3	6 1/2	165	7	178	7 1/2	191	7 3/4	197	7 5/8	200	8 1/8	207		
3 1/2	6 1/2	165	7	178	7 1/2	191	7 3/4	197	7 5/8	200	8 1/8	207		
4	6 5/8	168	7 1/4	184	7 5/8	194	7 7/8	200	8	203	8 3/8	213	9	229

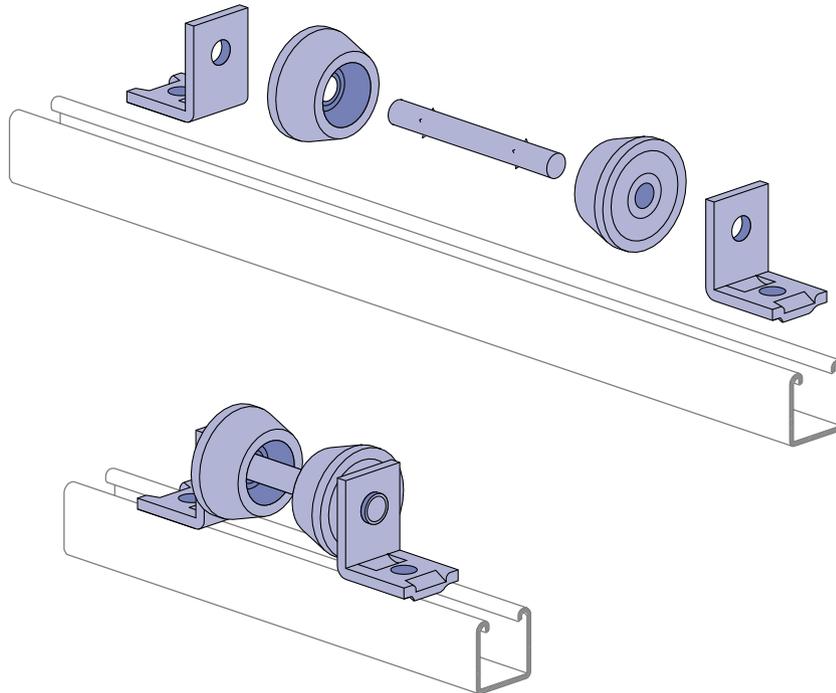
Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	1 3/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# PIPE ROLLERS

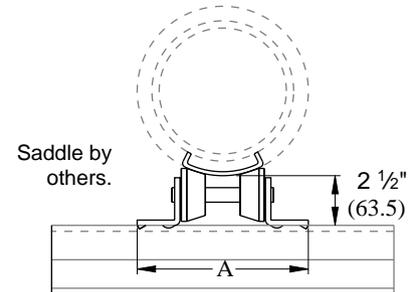
FOR 1<sup>5</sup>/<sub>8</sub>" (41 MM) WIDTH SERIES CHANNEL



## P2474-1 thru P2474-4



## PIPE ROLLER FOR 1" - 8" PIPE



- Pipe roller will fit standard saddles.
- Select proper roller from chart.
- Requires 2 each 1/2" x 1<sup>5</sup>/<sub>16</sub>" bolts and 1/2" channel nuts per assembly. Sold separately.

Design Load  
750 Lbs (3.3 kN)

Part Number	"A"		Weight/C	
	In	mm	Lbs	kg
P2474-1	6 <sup>3</sup> / <sub>4</sub>	171.5	299	135.6
P2474-2	7 <sup>1</sup> / <sub>2</sub>	190.5	304	137.9
P2474-3	8 <sup>1</sup> / <sub>2</sub>	215.9	311	141.1
P2474-4	9 <sup>9</sup> / <sub>16</sub>	242.9	319	144.7

Parts are shipped loose and are easily assembled when installed.

### CHART FOR ROLLER PART NUMBER SELECTION

Pipe Size In	Insulation Thickness						
	No Insulation	1" (25.4)	1 <sup>1</sup> / <sub>2</sub> " (38.1)	2" (50.8)	2 <sup>1</sup> / <sub>2</sub> " (63.5)	3" (76.2)	4" (101.6)
1/2	P2474-1	P2474-1	P2474-1	P2474-2			
3/4	P2474-1	P2474-1	P2474-1	P2474-2			
1	P2474-1	P2474-1	P2474-1	P2474-2			
1 <sup>1</sup> / <sub>4</sub>	P2474-1	P2474-1	P2474-1	P2474-2			
1 <sup>1</sup> / <sub>2</sub>	P2474-1	P2474-1	P2474-2	P2474-2	P2474-2		
2	P2474-1	P2474-1	P2474-2	P2474-2	P2474-2		
2 <sup>1</sup> / <sub>2</sub>	P2474-1	P2474-1	P2474-2	P2474-2	P2474-2		
3	P2474-1	P2474-2	P2474-2	P2474-3	P2474-3	P2474-3	
3 <sup>1</sup> / <sub>2</sub>	P2474-1	P2474-2	P2474-2	P2474-3	P2474-3	P2474-3	
4	P2474-1	P2474-2	P2474-2	P2474-3	P2474-3	P2474-3	
5	P2474-2	P2474-3	P2474-3	P2474-3	P2474-3	P2474-4	P2474-4
6	P2474-2	P2474-3	P2474-3	P2474-3	P2474-3	P2474-4	P2474-4
8	P2474-2	P2474-3	P2474-4	P2474-4	P2474-4	P2474-4	P2474-4

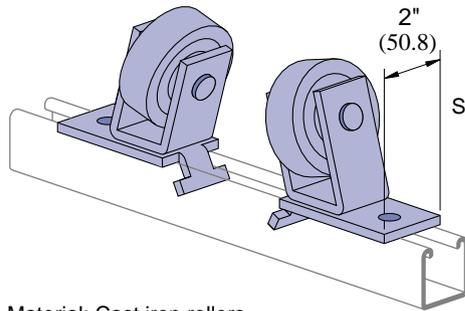
Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	1 <sup>3</sup> / <sub>16</sub> " (20.6 mm) From End 1 <sup>1</sup> / <sub>8</sub> " (47.6 mm) On Center	1 <sup>5</sup> / <sub>8</sub> " 41.3 mm	1/4" 6.4 mm

# PIPE ROLLERS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P2475



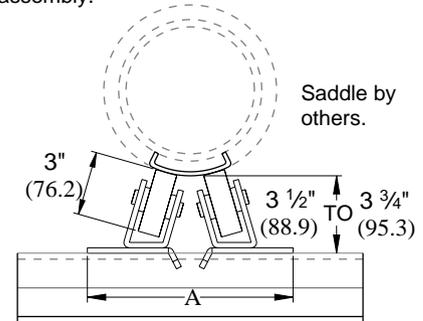
Sold in pairs.

Design Load  
1500 Lbs (6.7 kN)

Material: Cast iron rollers.

## PIPE ROLLER FOR 6" - 16" PIPE

- Requires 2 each 1/2" x 15/16" bolts and 1/2" channel nuts per assembly. Sold separately.

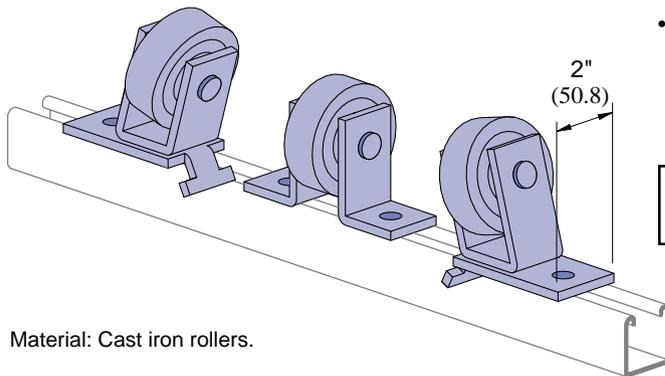


### CHART FOR DIMENSION A

Wt/C 680 Lbs (308.4 kg)

Pipe Size In	Insulation Thickness													
	No Insulation		1"	(25.4)	1 1/2"	(38.1)	2"	(50.8)	2 1/2"	(63.5)	3"	(76.2)	4"	(101.6)
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
6	9 1/2	241	10 1/4	260	10 1/2	267	10 3/4	273	11	279	11 3/8	289	11 7/8	302
8	10 1/8	257			11	279	11 3/8	289	11 3/4	299	12	305	12 1/2	318
10	10 3/4	273			11 5/8	295	12	305	12 1/4	311	12 1/2	318	13	330
12	11 1/4	286			12 1/8	308	12 1/2	318	12 3/4	324	13	330	13 1/2	343
14	11 5/8	295			12 1/2	318	12 7/8	327	13	330	13 3/8	340	14	356
16	12 1/8	308			13	330	13 3/8	340	13 7/8	352	14	356	14 1/2	368

## P2476

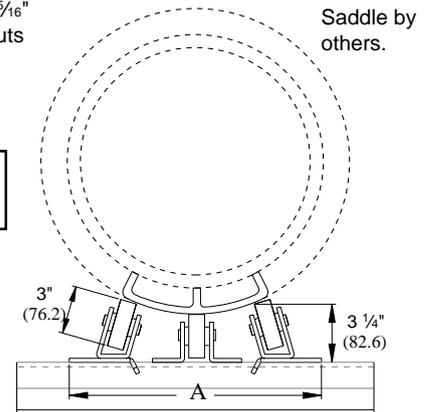


Material: Cast iron rollers.

- Requires 4 each 1/2" x 15/16" bolts and 1/2" channel nuts per assembly. Sold separately.

Design Load  
2000 Lbs (8.9 kg)

## PIPE ROLLER FOR 16" - 24" PIPE



### CHART FOR DIMENSION A

Wt/C 1046 Lbs (474.5 kg)

Pipe Size In	Insulation Thickness									
	1 1/2"	(38.1)	2"	(50.8)	2 1/2"	(63.5)	3"	(76.2)	4"	(101.6)
	In	mm	In	mm	In	mm	In	mm	In	mm
16					13 7/8	352	14	356	14 1/2	368
18	13 5/8	346	14	356	14 1/8	359	14 1/2	368	15	381
20	14 1/8	359	14 1/2	368	14 3/4	375	15	381	15 1/2	394
24	15 1/4	387	15 1/2	393	15 7/8	403	16 1/8	410	16 5/8	422

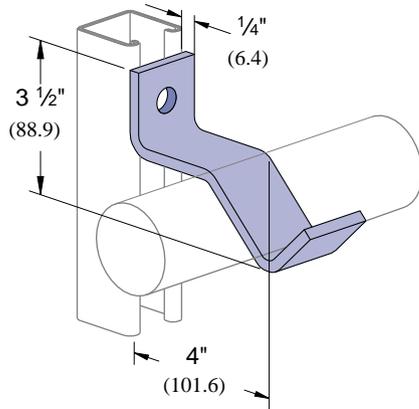
Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	1 3/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

# PIPE BRACKETS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P2481

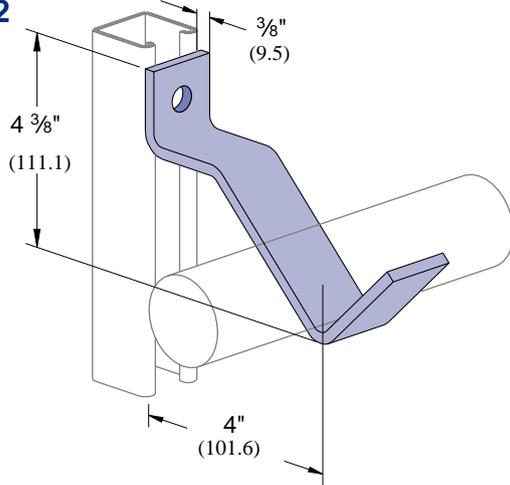


For 1/2" pipe to 1 1/2" pipe.

Design Load (Channel Upright Listed)

Weight/C		P1000		P1100		P2000	
Lbs	kg	Lbs	kN	Lbs	kN	Lbs	kN
90	40.8	85	.4	85	.4	85	.4

## P2482



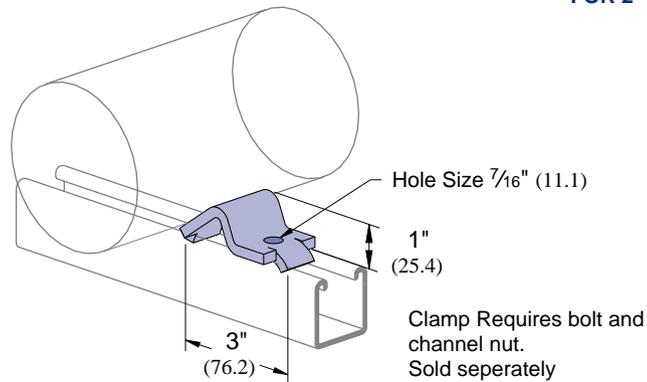
For 2" pipe to 3" pipe.

Design Load (Channel Upright Listed)

Weight/C		P1000		P1100		P2000	
Lbs	kg	Lbs	kN	Lbs	kN	Lbs	kN
139	63.0	185	.8	120	.5	95	.4

## P2243

PIPE BLOCK  
FOR 2" (50.8) TO 8" (203.2) PIPES



Wt/C 40 Lbs (18.1 kg)

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	1 3/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

## ELECTRICAL METALLIC TUBING (EMT) - THIN WALL

Tubing Size (Nominal)	Outside Diameter		Inside Diameter		Weight Of Tubing	
	In	mm	In	mm	Lbs/Ft	kg/m
3/8	0.577	14.7	0.497	12.6	.23	0.34
1/2	0.706	17.9	0.626	15.9	.29	0.43
3/4	0.922	23.4	0.830	21.1	.44	0.65
1	1.163	29.5	1.055	26.8	.64	0.95
1 1/4	1.510	38.4	1.388	35.3	.95	1.41
1 1/2	1.740	44.2	1.618	41.1	1.10	1.64
2	2.197	55.8	2.075	52.7	1.40	2.08
2 1/2	2.875	73.0	2.731	69.4	2.30	3.42
3	3.500	188.9	3.356	85.2	2.70	4.02
3 1/2	4.000	101.6	3.834	97.4	3.40	5.06
4	4.500	114.3	4.334	110.1	4.00	5.95

Table furnished by American Iron and Steel Institute, New York.

## INTERMEDIATE METALLIC CONDUIT (IMC)

Conduit Size (Nominal)	Outside Diameter		Inside Diameter		Weight Of Conduit		Weight of Conduit and Conductor	
	In	mm	In	mm	Lbs/Ft	kg/m	Lbs/Ft	kg/m
1/2	0.815	20.7	0.745	18.9	.60	.89	0.12	0.37
3/4	1.029	26.1	0.954	24.2	.82	1.22	1.13	0.55
1	1.290	32.8	1.205	30.6	1.16	1.72	1.82	0.83
1 1/4	1.638	41.6	1.553	38.9	1.50	2.23	2.67	1.21
1 1/2	1.883	47.8	1.793	45.5	1.82	2.71	3.42	1.55
2	2.360	59.9	2.266	57.5	2.42	3.60	5.04	2.29
2 1/2	2.857	72.6	2.727	69.2	4.01	5.97	7.75	3.52
3	3.476	88.3	3.346	85.0	4.43	6.59	10.69	4.85
3 1/2	3.971	100.9	3.841	97.5	5.73	8.53	13.46	6.11
4	4.466	113.4	4.336	110.1	6.38	9.49	16.37	7.41

## RIGID STEEL (HEAVY DUTY) CONDUIT

Conduit Size (Nominal)	I. D. Of Conduit		O. D. Of Conduit		O. D. Of Coupling		Weight of Conduit		Maximum Weight* Of Conduit And Conductor			
	In	mm	In	mm	In	mm	Lbs/Ft	kg/m	Lead Covered		Not Lead Covered	
									Lbs/Ft	kg/m	Lbs/Ft	kg/m
½	0.622	15.8	.840	21.3	1.063	27.0	.85	1.26	1.2	1.79	1.0	1.49
¾	0.824	20.9	1.050	26.6	1.297	32.9	1.13	1.68	1.8	2.68	1.4	2.08
1	1.049	26.6	1.315	33.4	1.563	39.7	1.68	2.50	2.6	3.87	2.3	3.42
1¼	1.380	35.1	1.660	42.2	1.969	50.0	2.28	3.39	4.3	6.40	3.6	5.36
1½	1.610	40.9	1.900	48.3	2.234	56.7	2.73	4.06	5.9	8.79	4.5	6.70
2	2.067	52.5	2.375	60.3	2.719	69.1	3.68	5.48	8.5	12.65	7.2	10.71
2½	2.469	62.5	2.875	73.0	3.313	84.2	5.82	8.66	11.5	17.11	10.2	15.18
3	3.068	77.9	3.500	89.9	3.938	100.0	7.62	11.34	16.5	24.55	14.5	21.56
3½	3.548	90.1	4.000	101.6	4.438	112.7	9.20	13.64	19.0	28.33	17.5	26.04
4	4.026	102.3	4.500	114.3	4.938	125.4	10.89	16.21	24.8	36.91	21.5	32.00
5	5.047	128.2	5.563	141.3	6.296	159.9	14.81	22.04	35.9	53.42	30.8	45.83
6	6.065	154.1	6.625	168.3	7.358	186.9	19.19	28.56	50.7	75.45	43.4	64.59

\* Maximum weight equals weight of rigid conduit plus weight of heaviest conductor combination (from the National Electrical Code Handbook.)

**346-12. Supports.** Rigid metal conduit shall be installed as a complete system as provided in Article 300 and shall be securely fastened in place. Conduit shall be firmly fastened within 3 feet (914 mm) of each outlet box, junction box, cabinet, or fitting. Conduit shall be supported at least every 10 feet (3.05 m).

*Exception: If made up with threaded couplings, it shall be permissible to support straight runs of rigid metal conduit in accordance with Table 346-12, provided such supports prevent transmission of stresses to termination where conduit is deflected between supports.*

**Table 346-12**  
Support for Rigid Metal Conduit

Conduit Size		Maximum Distance Between Supports	
In	mm	Ft	m
½ - ¾	13 - 19	10	3.05
1	25	12	3.66
1¼ - 1½	32 - 38	14	4.27
2 - 2½	51 - 64	16	4.88
3 & larger	76 & larger	20	6.10

Maximum Spacing Between Pipe Supports					
Nominal Pipe Size	Maximum Span		Nominal Pipe Size	Maximum Span	
	In	m		In	m
1	7	2.13	8	19	5.79
1½	9	2.74	10	22	6.71
2	10	3.05	12	23	7.01
2½	11	3.35	14	25	7.62
3	12	3.66	16	27	8.23
3½	13	3.96	18	28	8.53
4	14	4.27	20	30	9.14
5	16	4.88	24	32	9.75

The above spacing based on a combined bending and shear stress of 1500 PSI when pipe is filled with water and the pitch of the line is such that a sag of 0.1 in. between supports is permissible.

**SCHEDULE 40: STEEL PIPE**

Pipe Size (Nominal)	Outside Diameter		Inside Diameter		Pipe Weight		Pipe and Water Weight	
	In	mm	In	mm	Lbs/Ft	kg/m	Lbs/Ft	kg/m
3/8	0.675	17.1	0.493	12.5	0.57	0.85	0.653	0.97
1/2	0.840	21.3	0.622	15.8	0.85	1.26	0.982	1.46
3/4	1.050	26.7	0.824	20.9	1.13	1.68	1.360	2.02
1	1.315	33.4	1.049	26.6	1.68	2.50	2.054	3.06
1 1/4	1.660	42.2	1.380	35.1	2.27	3.38	2.913	4.34
1 1/2	1.900	48.3	1.610	40.9	2.72	4.05	3.602	5.36
2	2.375	60.3	2.067	52.5	3.65	5.43	5.105	7.60
2 1/2	2.875	73.0	2.469	62.7	5.79	8.62	7.866	11.71
3	3.500	88.9	3.068	77.9	7.58	11.28	10.78	16.04
3 1/2	4.000	101.6	3.548	90.1	9.11	13.56	13.39	19.93
4	4.500	114.3	4.026	102.3	10.80	16.07	16.31	24.27
5	5.563	141.3	5.047	128.2	14.60	21.73	23.26	34.61
6	6.625	168.3	6.065	154.1	19.00	28.27	31.51	46.89
8	8.625	219.1	7.981	202.7	28.60	42.56	50.29	74.84
10	10.750	273.1	10.020	254.5	40.50	60.27	74.65	111.09
12	12.750	324.9	11.938	303.2	53.60	79.76	102.00	151.79
14	14.000	355.6	13.126	333.4	63.30	94.20	122.10	171.70
16	16.000	406.4	15.000	381.0	82.80	123.22	159.30	237.06
18	18.000	457.2	16.876	428.7	105.00	156.26	201.90	300.46
20	20.000	508.0	18.814	477.9	123.00	183.04	243.30	362.07
24	24.000	609.6	22.626	574.7	171.00	254.47	345.50	514.15

**SCHEDULE 80: STEEL PIPE**

Pipe Size (Nominal)	Outside Diameter		Inside Diameter		Pipe Weight		Pipe and Water Weight	
	In	mm	In	mm	Lbs/Ft	kg/m	Lbs/Ft	kg/m
3/8	0.675	17.1	0.423	10.7	0.74	1.10	0.801	1.19
1/2	0.840	21.3	0.546	13.9	1.09	1.62	1.191	1.77
3/4	1.050	26.7	0.742	18.8	1.47	2.19	1.668	2.48
1	1.315	33.4	0.957	24.3	2.17	3.23	2.481	3.69
1 1/4	1.660	42.2	1.278	32.5	3.00	4.46	3.555	5.29
1 1/2	1.900	48.3	1.500	38.1	3.63	5.40	4.395	6.57
2	2.375	60.3	1.939	49.3	5.03	7.49	6.309	9.39
2 1/2	2.875	73.0	2.323	59.0	7.66	11.40	9.497	14.13
3	3.500	88.9	2.900	73.7	10.3	15.33	13.16	19.58
3 1/2	4.000	101.6	3.364	85.4	12.5	18.60	16.35	24.33
4	4.500	114.3	3.826	97.2	15.0	22.32	19.98	29.73
5	5.563	141.3	4.813	122.3	20.8	31.00	28.69	42.67
6	6.625	168.3	5.761	146.3	28.6	42.56	39.89	59.36
8	8.625	219.1	7.625	193.7	43.4	64.59	63.20	94.25
10	10.75	273.1	9.564	242.9	64.3	95.69	95.40	141.97
12	12.75	323.9	11.376	289.0	88.5	131.70	132.50	197.18
14	14.00	355.6	12.500	317.5	106.1	157.89	159.30	237.06
16	16.00	406.4	14.314	363.6	136.5	203.13	206.20	306.85
18	18.00	457.2	16.126	409.6	170.8	254.18	259.30	385.88
20	20.00	508.0	17.938	455.6	208.9	310.87	318.30	473.68
24	24.00	609.6	21.564	547.7	296.4	441.09	454.70	676.66

## SCHEDULE 40: PVC PLASTIC PIPE

Pipe Size (Nominal)	Outside Diameter		Inside Diameter		Pipe Weight		Pipe and Water Weight	
	In	mm	In	mm	Lbs/Ft	kg/m	Lbs/Ft	kg/m
1/4	.540	13.7	.354	9.0	.081	0.12	0.12	0.18
3/8	.675	17.1	.483	12.3	.109	0.16	0.19	0.28
1/2	.840	21.3	.608	15.4	.161	0.24	0.29	0.43
3/4	1.050	26.7	.810	20.6	.214	0.32	0.44	0.65
1	1.315	33.4	1.033	26.2	.315	0.47	0.68	1.01
1 1/4	1.660	42.2	1.364	34.6	.426	0.63	1.06	1.58
1 1/2	1.900	48.3	1.592	40.4	.509	0.76	1.37	2.04
2	2.375	60.3	2.049	52.0	.682	1.01	2.11	3.14
2 1/2	2.875	73.0	2.445	62.1	1.076	1.60	3.11	4.63
3	3.500	88.9	3.042	77.3	1.409	2.10	4.55	6.77
4	4.500	114.3	3.998	101.5	2.006	2.99	7.44	11.07
6	6.625	168.3	6.031	153.2	3.535	5.26	15.90	23.66
8	8.625	219.1	7.943	201.8	5.305	7.89	26.75	39.81
10	10.750	273.1	9.976	253.4	7.532	11.21	41.35	61.53

## CHANNEL SELECTION FOR SPRINKLER PIPE TRAPEZE HANGERS

Span of Trapeze Ft (mm)	Pipe Size (Nominal)												
	1 In	1 1/4 In	1 1/2 In	2 In	2 1/2 In	3 In	3 1/2 In	4 In	5 In	6 In	8 In	10 In	
1 1/2 (460)									P1000				
2 (610)	P3000			P1000				P1001					
2 1/2 (760)													
3 (910)	P1000			P5500				P1001					
4 (1220)													
5 (1520)													
6 (1830)													
7 (2130)													
8 (2440)	P1001							P5501		P1004 A			
9 (2740)													
10 (3050)									2-P1004 A				

• Based on NFPA-13-1989 Section Modulus Table 3-10.1.7(a)

• For Schedule 40 Pipe

Note: The table is based on a maximum allowable bending stress of 15 KSI and a midspan concentrated load from 15 ft of water-filled pipe, plus 250 lb.

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### MATERIAL

Unistrut fittings, unless noted, are made from hot-rolled, pickled and oiled steel plates, strip or coil, and conform to ASTM specifications A575, A576, A635, or A36. The fitting steel also meets the physical requirements of ASTM A570 GR 33. The pickling of the steel produces a smooth surface free from scale.

Maple cable saddles, cable clamps and bus bar clamps are made from kiln-dry maple treated with paraffin to a depth of  $\frac{1}{16}$ " (1.6mm). Special sizes of clamps can be fabricated upon request. Porcelain cable

clamps are made by the dry process and white glazed. Cable saddles are fiberglass-reinforced polyester.

### FINISHES

Components listed in this section are available in: electro-galvanized (EG), conforming to ASTM B633 Type III SC1; Hot-dipped galvanized (HG), conforming to ASTM A123 or A153, Perma-Green II (GR), and plain (PL).

Note: Many Unistrut Metal Framing components, when used with appropriate closures, are UL® listed, and CSA approved.

### DESIGN LOAD

Design load data, where shown, is based on the ultimate strength of the connection with a safety factor of 2.5, unless otherwise noted.

### DIMENSIONS

Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

# UNISTRUT RACEWAY FILL CHARTS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## U.L. LISTED

Unistrut channel is listed by **Underwriters' Laboratories** as a surface metal raceway. Snap-in closure strip is used to complete the raceway. Accessory parts listed by Underwriters are noted on drawings.

The following tables represent maximum number of conductors when raceway is not employed with fixtures or where the clearance between fixtures and raceway is greater than 1/2" (12.7). In all cases the snap-in cover is required to complete raceway enclosure.

### P3000, & -KO

Gage	Number and Conductor Size (AWG)				
	14	12	10	8	6
THWN, THHN	72	54	34	17	12
XHHW	48	37	29	13	10
T, TW	46	36	28	13	7
THW	30	25	20	10	7
RH	27	22	13	7	5
RHH, RHW	19	16	13	7	5

### P3300, P4000

Gage	Number and Conductor Size (AWG)				
	14	12	10	8	6
THWN, THHN	40	30	19	9	6
XHHW	26	21	16	7	5
T, TW	26	20	15	7	4
THW	17	14	11	6	4
RH	15	12	7	4	3
RHH, RHW	10	9	7	4	2

### P5500, & -KO

Gage	Number and Conductor Size (AWG)				
	14	12	10	8	6
THWN, THHN	141	105	66	33	23
XHHW	93	73	57	27	19
T, TW	91	58	55	26	15
THW	59	49	39	20	15
RH	53	44	26	14	10
RHH, RHW	37	32	26	14	10

### P1000, & -KO, P1100 & -KO, P2000 & -KO

Gage	Number and Conductor Size (AWG)				
	14	12	10	8	6
THWN, THHN	88	66	42	20	14
XHHW	58	46	35	16	12
T, TW	57	44	34	16	9
THW	37	30	24	12	9
RH	33	27	16	9	6
RHH, RHW	23	20	16	9	6

### P5000, & -KO

Gage	Number and Conductor Size (AWG)				
	14	12	10	8	6
THWN, THHN	193	105	91	45	32
XHHW	128	101	78	37	27
T, TW	125	98	75	35	20
THW	81	67	54	28	20
RH	73	60	36	19	13
RHH, RHW	51	44	36	19	13

## C.S.A. APPROVED

### MAXIMUM NUMBER OF WIRES FOR TYPES T, THHN, THW, THWN, TW, R, RH, RHH, RHW OR XHHW

Suitable for number of wires in Column A when installed to support and supply electric discharge type lighting fixtures when raceway wiring is suitable for at least 75° C except wire suitable for 60° C may be used when clearance between fixtures and raceways is at least 1/2" (12.7). Also suitable for number of wires in column B when installed to support electric discharge type lighting fixtures when raceway wiring is suitable for at least 75° C and clearance between fixtures and raceway is at least 1/8" (3.2).

Raceway Wire Size AWG	P1000, &-KO P1100, &-KO P2000, &-KO		P3000, &-KO		P3300, P4000		P5000 &-KO		P5500, &-KO	
	A	B	A	B	A	B	A	B	A	B
	14	6	10	5	10	4	6	10	10	10
12	6	10	4	10	3	6	10	10	10	10
10	5	8	4	6	-	-	8	10	8	10
8	4	6	3	4	-	-	6	9	6	8
6	2	3	2	2	-	-	4	6	4	6

Unistrut channels are also certified by Canadian Standards Association.

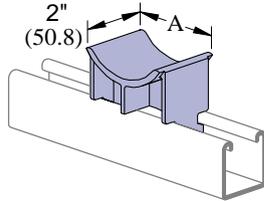
# ELECTRICAL FITTINGS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P1753 FG P1754 FG

### CABLE SADDLES

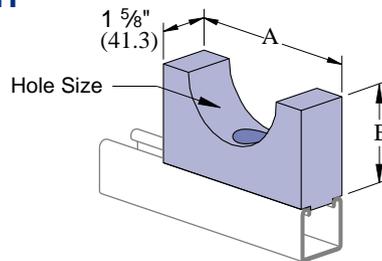


Part Number	"A"		Maximum Cable Diameter		Weight/C	
	In	mm	In	mm	Lbs	kg
<b>P1753 FG</b>	2 13/16	71.4	3	76.2	12	5.4
<b>P1754 FG</b>	3 3/4	95.3	4 1/2	114.3	17	7.7
<b>P1753 PO</b>	3	76.2	3	76.2	75	34.0
<b>P1754 PO</b>	4	101.6	4 1/2	114.3	95	43.1

Material: FG - Fiberglass Reinforced Polyester,  
PO - Dry Process White Glazed Porcelain

## P2649 A thru P2649 H

### MAPLE CABLE SADDLES



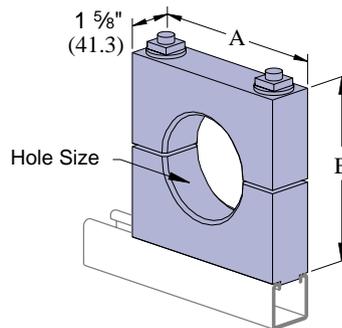
- 3/8" Flat Head Machine Screw included.
- Specify hole size when ordering.
- Order channel nuts as required.

Part Number	Hole Size		"A"		"B"		Weight/C	
	In	mm	In	mm	In	mm	Lbs	kg
<b>P2649 A</b>	0 - 1	0 - 25.4	3	76.2	1 3/4	44.5	31	14.1
<b>P2649 B</b>	1 - 1 1/2	25.4 - 38.1	3 1/2	88.9	2	50.8	38	17.2
<b>P2649 C</b>	1 1/2 - 2	38.1 - 50.8	4	101.6	2 1/4	57.2	47	21.3
<b>P2649 D</b>	2 - 2 1/2	50.8 - 63.5	4 1/2	114.3	2 1/2	63.5	57	25.9
<b>P2649 E</b>	2 1/2 - 3	63.5 - 76.2	5	127.0	2 3/4	69.9	68	30.8
<b>P2649 F</b>	3 - 3 1/2	76.2 - 88.9	5 1/2	139.7	3	76.2	80	36.3
<b>P2649 G</b>	3 1/2 - 4	88.9 - 101.6	6	152.4	3 1/4	82.6	94	42.6
<b>P2649 H</b>	over 4	over 101.6						

Material:  
Maple hardwood  
paraffin impregnated.

## P2645 A thru P2645 H

### MAPLE CABLE CLAMPS



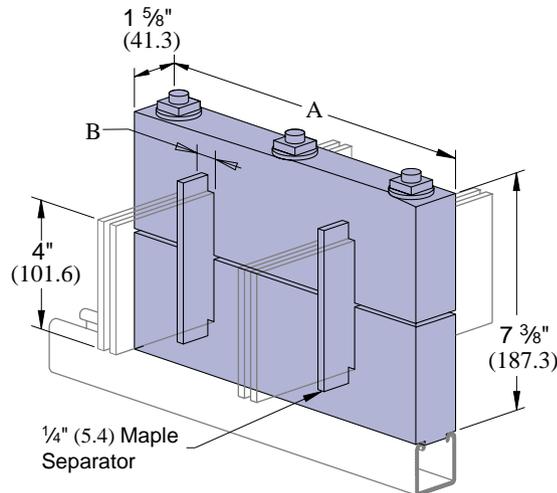
- 3/8" studs, square nuts and washers included.
- Specify hole size when ordering.
- Order channel nuts as required.

Part Number	Hole Size		"A" and "B" Dimensions		Weight/C	
	In	mm	In	mm	Lbs	kg
<b>P2645 A</b>	0 - 1	0 - 25.4	3 1/2	88.9	84	38.1
<b>P2645 B</b>	1 - 1 1/2	25.4 - 38.1	4	101.6	102	46.3
<b>P2645 C</b>	1 1/2 - 2	38.1 - 50.8	4 1/2	114.3	121	54.9
<b>P2645 D</b>	2 - 2 1/2	50.8 - 63.5	5 1/2	139.7	165	74.8
<b>P2645 E</b>	2 1/2 - 3	63.5 - 76.2	6	152.4	189	85.7
<b>P2645 F</b>	3 - 3 1/2	76.2 - 88.9	6 1/2	165.1	215	97.5
<b>P2645 G</b>	3 1/2 - 4	88.9 - 101.6	7	177.8	243	110.2
<b>P2645 H</b>	over 4	over 101.6				

Material:  
Maple  
hardwood  
paraffin  
impregnated.

**P2647 A thru P2647 F**

**4" (101.6) BUS BAR MAPLE CLAMPS**



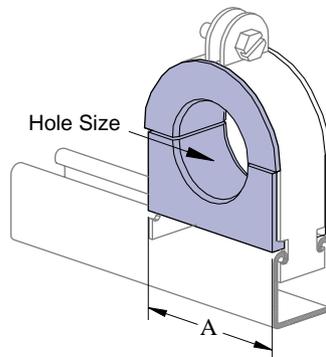
- 1/2" studs, square nuts and washers are included.
- Channel nuts must be ordered separately.
- Bus bar maple clamps also available in 1/4" (6.4) x 2" (50.8) and 1/4" (6.4) x 6" (152.4)

Material:  
Paraffin  
impregnated  
maple  
hardwood.

Part Number	"A"		"B"		No. Bus Separators	No. Bars Per Leg	Wt/C	
	In	mm	In	mm			Lbs	kg
<b>P2647 A</b>	8 1/2	215.9	9/32	7.1	0	1	421	191.0
<b>P2647 B</b>	9 1/2	241.3	13/16	20.6	2	2	465	210.9
<b>P2647 C</b>	10 1/2	266.7	1 5/16	33.3	4	3	509	230.9
<b>P2647 D</b>	11 1/2	292.1	1 13/16	46.0	6	4	553	250.8
<b>P2647 E</b>	12 1/2	317.5	2 3/8	60.3	8	5	597	270.8
<b>P2647 F</b>	13 1/2	342.9	2 7/8	73.0	10	6	631	286.2

**P1690 thru P1697**

**MAPLE CABLE CLAMPS**



- Use with steel clamp and Everdur hardware. Order clamp separately.
- Specify hole size when ordering.

Material:  
Paraffin  
impregnated  
maple  
hardwood.

Part Number	Order Steel Clamp Number	Hole Size		"A"		Wt/C	
		In	mm	In	mm	Lbs	kg
<b>P1690</b>	<b>P1113 E</b>	0 - 5/8	0 - 15.9	1 1/2	38.1	24	10.9
<b>P1691</b>	<b>P1115 E</b>	1/2 - 1	12.7 - 25.4	2 1/8	54.0	42	19.1
<b>P1692</b>	<b>P1117 E</b>	3/4 - 1 1/2	19.1 - 38.1	2 5/8	66.7	54	24.5
<b>P1693</b>	<b>P1118 E</b>	1 1/4 - 1 3/4	31.8 - 44.5	3	76.2	65	29.5
<b>P1694</b>	<b>P1119 E</b>	1 1/2 - 2 1/4	38.1 - 57.2	3 3/8	92.1	84	38.1
<b>P1695</b>	<b>P1120 E</b>	2 - 2 1/2	50.8 - 63.5	4 1/8	104.8	107	48.5
<b>P1696</b>	<b>P1121 E</b>	2 1/4 - 3	57.2 - 76.2	4 5/8	117.5	123	55.8
<b>P1697</b>	<b>P1123 E</b>	3 - 4	76.2 - 101.6	5 3/4	146.1	163	73.9

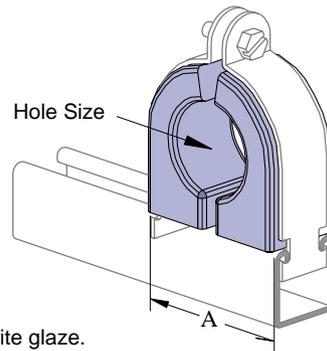
# ELECTRICAL FITTINGS

FOR 1½" (41 MM) WIDTH SERIES CHANNEL



## P1787 A thru P1795 B

## PORCELAIN CABLE CLAMPS



- Use with steel clamp and Everdur hardware.
- Order clamp separately.

Material: Dry process porcelain white glaze.

Part Number	Order Steel Clamp Number	Hole Size		"A"		Weight/C	
		In	mm	In	mm	Lbs	kg
P1787 A P1787 B P1787 C	P1113 E	¾	9.5	1⅞	47.6	36	16.3
		½	12.7			32	14.5
		⅝	15.9			31	14.1
P1788 P1788 A P1788 B P1788 C	P1115 E	¾	19.1	2⅜	60.3	57	25.9
		⅞	22.2			56	25.4
		1	25.4			55	24.9
		1⅛	28.6			48	21.8
P1789 P1789 A P1789 B P1789 C	P1117 E	1¼	31.8	2⅞	73.0	83	37.6
		1⅜	34.9			82	37.2
		1½	38.1			75	34.0
		1⅝	41.3			67	30.4
P1790 P1790 A P1790 B P1790 C	P1119 E	1¾	44.5	4	101.6	185	83.9
		1⅞	47.6			180	81.6
		2	50.8			160	72.6
		2⅛	54.0			140	63.5
P1791 P1791 A P1791 B P1791 C	P1120 E	2¼	57.2	4½	114.3	200	90.7
		2⅜	60.3			200	90.7
		2½	63.5			195	88.5
		2⅝	66.7			190	86.2
P1792 P1792 A P1792 B P1792 C	P1121 E	2¾	69.9	5⅝	130.2	260	117.9
		2⅞	73.0			240	108.9
		3	76.2			240	108.9
		3⅛	79.4			235	106.6
P1793 P1793 A P1793 B P1793 C	P1123 E	3¼	82.6	6⅝	155.6	387	175.5
		3⅜	85.7			367	166.5
		3½	88.9			360	163.3
		3⅝	92.1			350	158.8
P1794 P1794 A P1794 B P1794 C	P1124 E	3¾	95.3	7¼	184.2	600	272.2
		3⅞	98.4			580	263.1
		4	101.6			550	249.5
		4⅛	104.8			540	244.9
P1795 P1795 A P1795 B	P1124 E	4¼	108.0	7¼	184.2	550	249.5
		4⅜	111.1			500	226.8
		4½	114.3			490	222.3

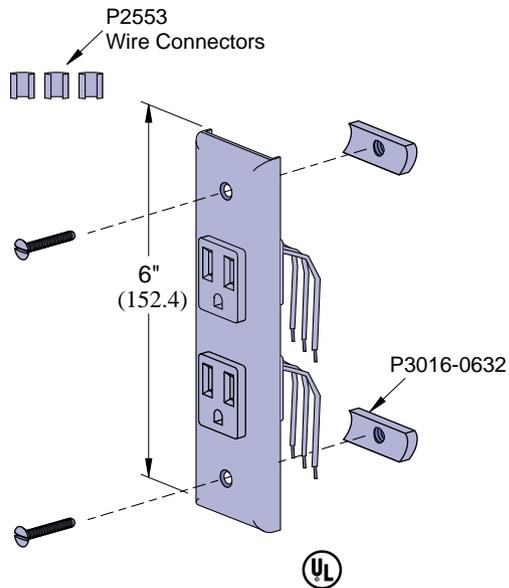
# RECEPTACLES

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

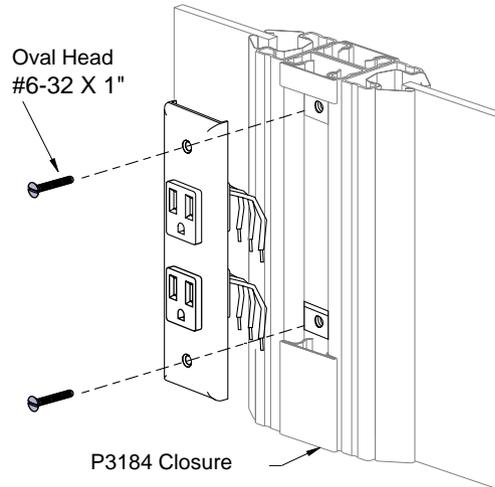


## P2557

## DUPLEX GROUNDED RECEPTACLE



- 125 V, 15 amp receptacle, NEMA configuration S-15R, cover plate.
- #6 screws, nuts and wire connectors included.
- Leads are 14 gage 105°C plastic covered.
- Ground wire is green 16 gage.

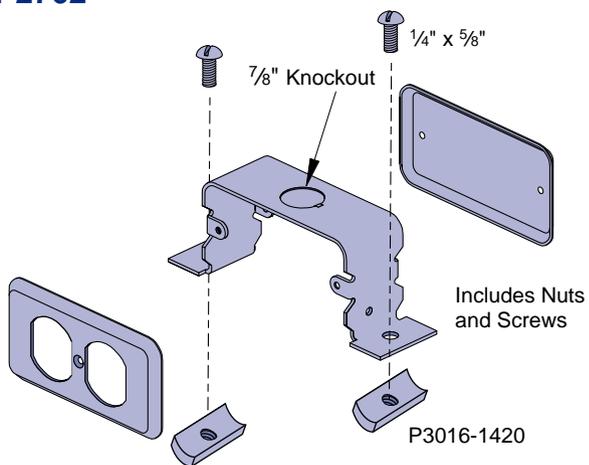


Finish: White powder coat.

Wt/C 38 Lbs (17.2 kg)

## P2761 P2762

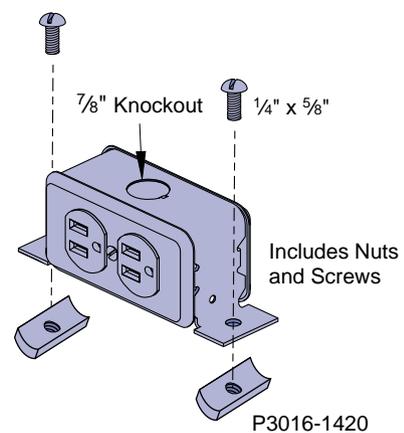
### RECEPTACLE BOX



Part Number	Outlet	Weight/C	
		Lbs	kg
P2761	Single	88	39.9
P2762	Duplex	88	39.8

## P2763 P2764 P2765

### RECEPTACLE UNIT



Part Number	Outlet	Weight/C		NEMA Receptacle Configuration
		Lbs	kg	
P2763	125V	108	49	5-15R
P2764	250V	108	49	6-15R
P2765	277V	108	49	7-15R

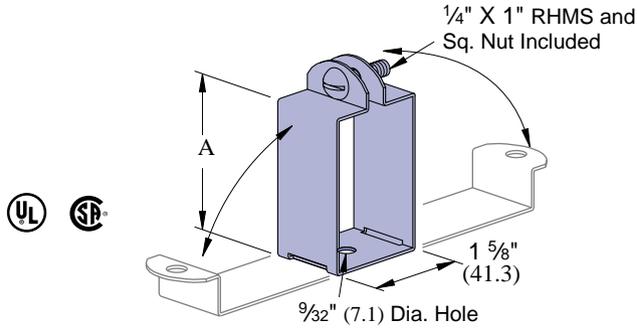
# FLUORESCENT FIXTURE HANGERS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P2537 P5537

### FLOURESCENT FIXTURE HANGERS



- Hanger provides more than 1/2" (12.7) space between channel and fixtures.

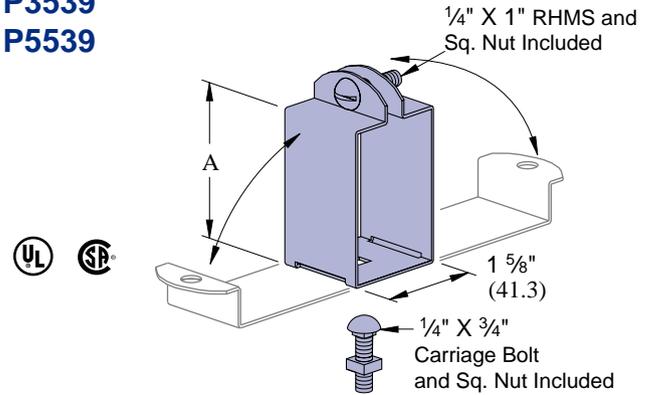
Design Load  
120 Lbs (.5 kN)

Materials: 18 gage (1.2).

Part Number	Use With Channel	"A"		Weight/C	
		In	mm	Lbs	kg
P2537	P1000	2 7/16	61.9	19	8.6
	P1100				
	P2000				
	P3000				
P5537	P5500	3 1/4	82.6	22	10.0

## P2539 P3539 P5539

### FLOURESCENT FIXTURE HANGERS



- Hanger provides 1/8" (3.2) space between channel and fixtures.

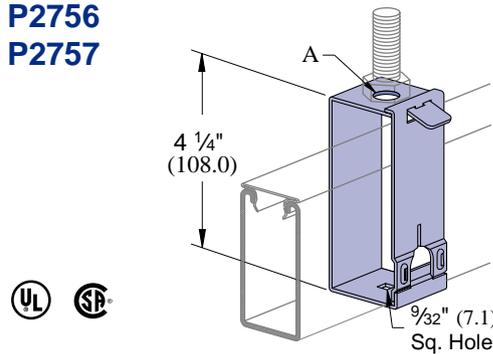
Design Load  
120 Lbs (.5 kN)

Materials: 18 gage (1.2).

Part Number	Use With Channel	"A"		Weight/C	
		In	mm	Lbs	kg
P2539	P1000	1 3/4	44.5	17	7.7
	P1100				
	P2000				
P3539	P3000	1 1/2	38.1	15	6.8
P5539	P5500	2 9/16	65.1	18	8.2

## P2755 P2756 P2757

### RACEWAY HANGERS



Use with Channels: P1001, P1101, P2001, P5000, & P5500.

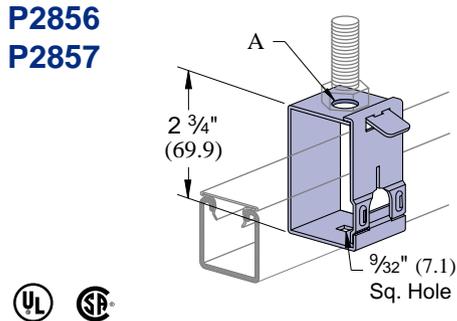
Design Load  
120 Lbs (.5 kN)

Material: 14 gage (1.9).

Part Number	"A"		Weight/C	
	In	mm	Lbs	kg
P2755	9/16	14.3	44	20.0
P2756	7/8	22.2	44	20.0
P2757	1 3/32	10.3	44	20.0

## P2855 P2856 P2857

### RACEWAY HANGERS



Use with Channels: P1000, P1100, P2000, P3000, P3300, P4000, P4001, P4100, & P4101.

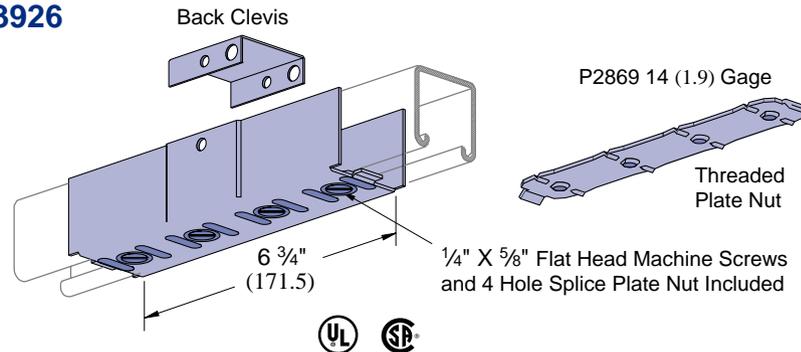
Design Load  
120 Lbs (.5 kN)

Material: 14 gage (1.9).

Part Number	"A"		Weight/C	
	In	mm	Lbs	kg
P2855	9/16	14.3	32	14.5
P2856	7/8	22.2	32	14.5
P2857	1 3/32	10.3	32	14.5

**P3922 thru P3926**

**SPLICE FITTINGS**

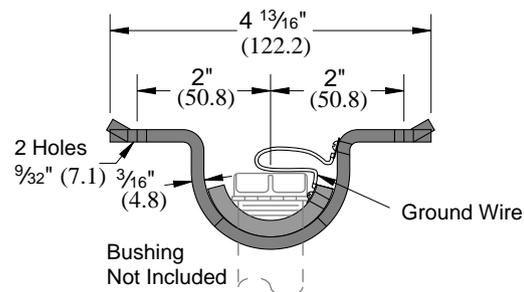
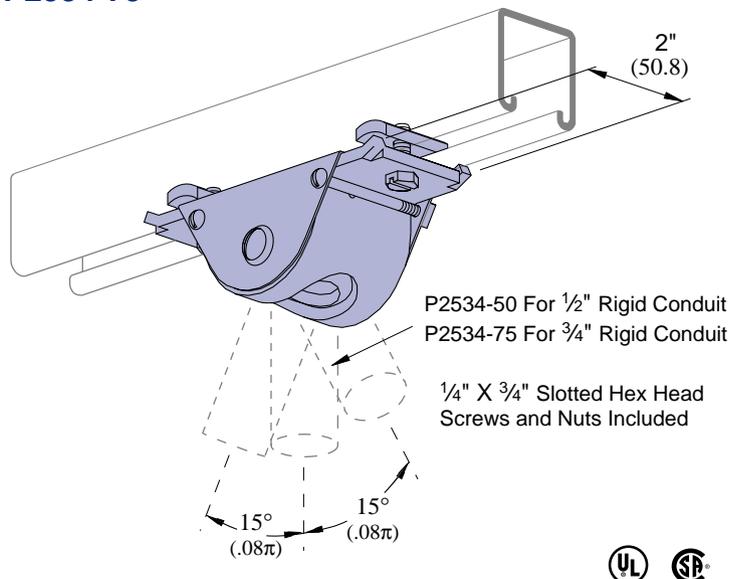


Assembly Number	Use With Channel	"A"		Clevis Number	Back Clevis Number	Plate Nut Number	Weight/C	
		In	mm				Lbs	kg
<b>P3922</b>	<b>P1000 P1100 P2000</b>	1 5/8"	41.3	P2377	P2517	P2869	100	45.4
<b>P3923</b>	<b>P3000</b>	1 3/8"	34.9	P3377	P2517	P2869	97	44.0
<b>P3924</b>	<b>P4000</b>	1 3/16"	20.6	P5377	P2517	P2869	80	36.3
<b>P3925</b>	<b>P5500</b>	1 5/8"	41.3	P2377	P5517	P2869	103	46.7
<b>P3926</b>	<b>P5000</b>	1 5/8"	41.3	P2377	P5017	P2869	106	48.1

Material:  
16 gage (1.6).

**P2534-50  
P2534-75**

**CONDUIT SWING FITTING**



Design Load  
300 Lbs (1.3 kN)

- Conduit hanger fittings allow a free swivel of 15° in one direction.
- Fitting may be mounted to the slot side of the Unistrut channel or to the back.

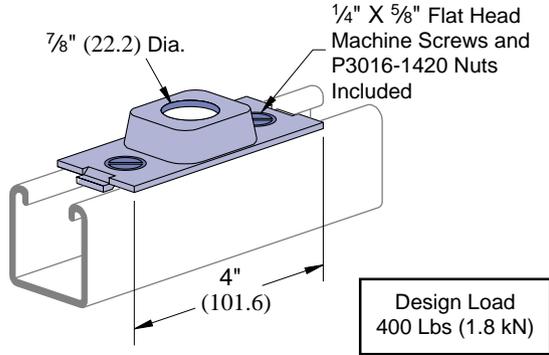
Wt/C 96 Lbs (43.5 kg)

# ELECTRICAL ACCESSORIES

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P2535 CONDUIT HANGER CONNECTION FOR 1/2" CONDUIT

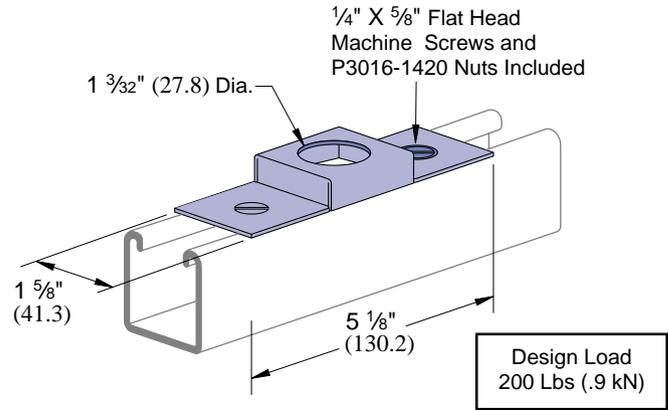


Material: 12 gage (2.7).

Wt/C 28 Lbs (12.7 kg)



## P2536 CONDUIT HANGER CONNECTION FOR 3/4" CONDUIT

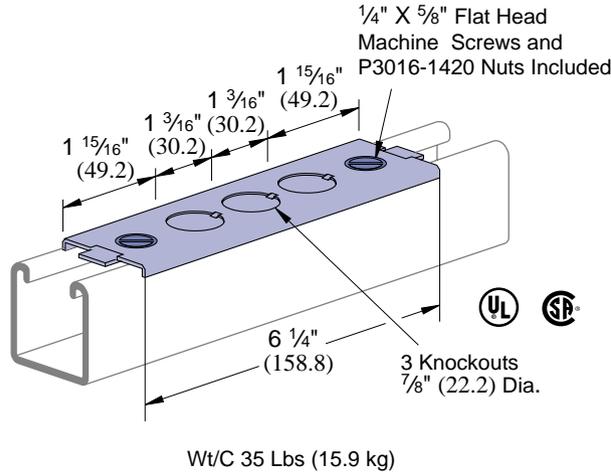


Material: 16 gage (1.5)

Wt/C 36 Lbs (16.3 kg)



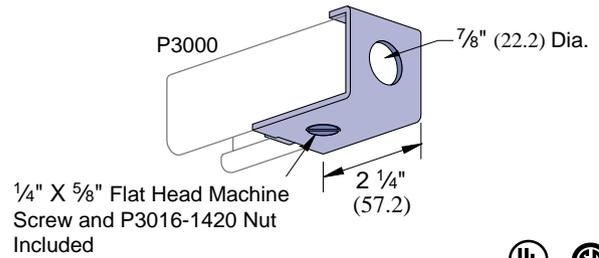
## P2522 OUTLET BOX CONNECTION



Wt/C 35 Lbs (15.9 kg)



## P3521-50 END CONNECTORS FOR 1/2" CONDUIT

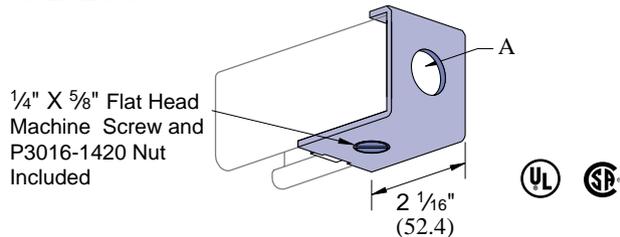


Material: 12 gage (2.7).

Wt/C 27 Lbs (12.2 kg)



## P2521-50 P2521-75 END CONNECTORS FOR 1/2" & 3/4" CONDUIT



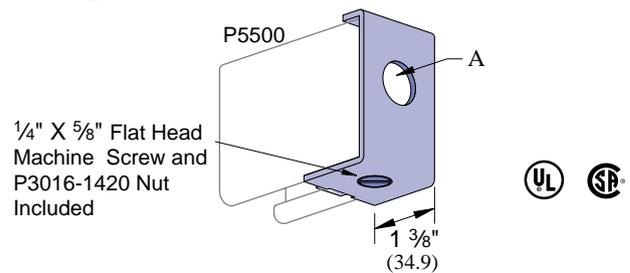
1/4" X 5/8" Flat Head Machine Screw and P3016-1420 Nut Included

For Unistrut channels P1000, P1100, & P2000.

Material: 12 gage (2.7)

Part Number	Conduit Size A	Weight/C	
	In	Lbs	kg
P2521-50	1/2	27	12.2
P2521-75	3/4	26	11.8

## P5521-50 P5521-75 END CONNECTORS FOR 1/2" & 3/4" CONDUIT



1/4" X 5/8" Flat Head Machine Screw and P3016-1420 Nut Included

Material: 12 gage (2.7).

Part Number	Conduit Size A	Weight/C	
	In	Lbs	kg
P5521-50	1/2	27	12.2
P5521-75	3/4	26	11.8

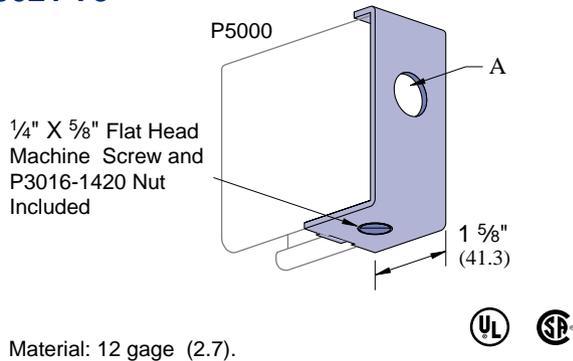
# ELECTRICAL ACCESSORIES

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P5021-50 P5021-75

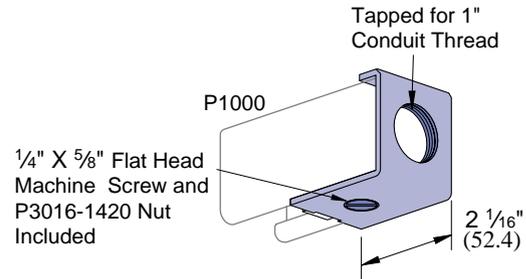
### END CONNECTOR FOR 1/2" & 3/4" CONDUIT



Part Number	Conduit Size A	Weight/C	
	In	Lbs	kg
P5021-50	1/2	31	14.1
P5021-75	3/4	30	13.6

## P2521-100

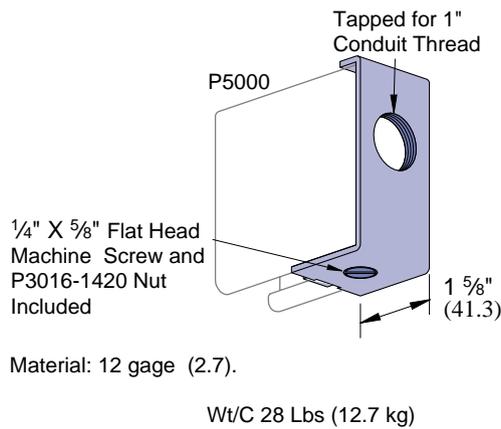
### END CONNECTOR FOR 1" CONDUIT



Wt/C 24 Lbs (10.9 kg)

## P5021-100

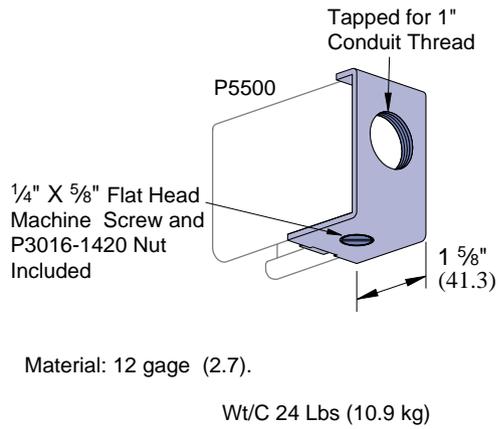
### END CONNECTOR FOR 1" CONDUIT



Wt/C 28 Lbs (12.7 kg)

## P5521-100

### END CONNECTOR FOR 1" CONDUIT



Wt/C 24 Lbs (10.9 kg)

## P1180 W thru P5580 W

### WIREWAY END CAPS



Material: .075" (1.9)

Part Number	Use With	Weight/C	
		Lbs	kg
P1180 W	P1100	12	5.4
P1280 W	P1000	11	5.0
P2280 W	P2000	11	5.0
P3280 W	P3000	15	6.8
P4280 W	P4000	5	2.3
P5280 W	P5000	22	10.0
P5580 W	P5500	18	8.2

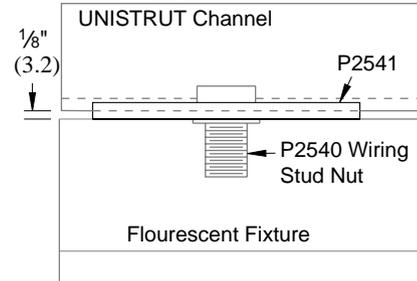
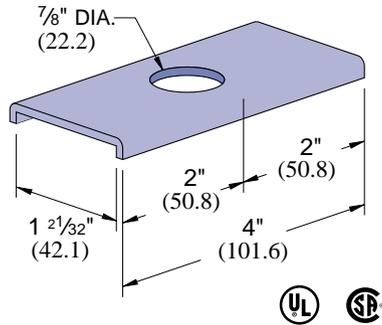
# ELECTRICAL ACCESSORIES

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



## P2541

## SPACER CLEVIS

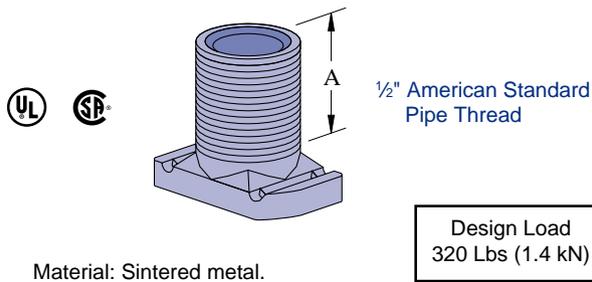


Material: 12 gage (2.7).

Wt/C 24 Lbs (10.9 kg)

## P2540 P2540 A

## WIRING STUD NUT



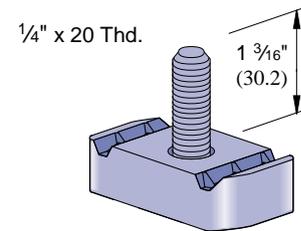
Material: Sintered metal.

Design Load  
320 Lbs (1.4 kN)

Part Number	"A"		Weight/C	
	In	mm	Lbs	kg
P2540	1 1/8	28.6	10	4.5
P2540 A	5/8	15.9	8	3.6

## P3116-125

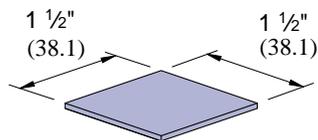
## FIXTURE STUD NUT



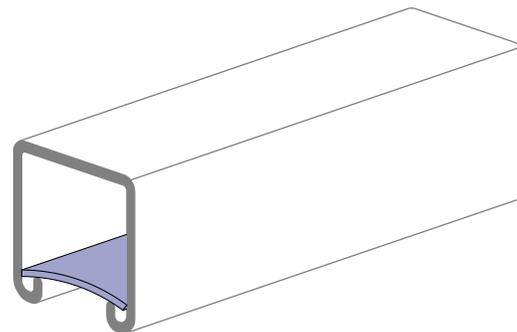
Wt/C 11 Lbs (5.0 kg)

## P2552

## POLYPROPYLENE WIRE RETAINER



Retainer may be easily pushed into channel to support wires until closure strip is installed.



Wt/C .30 Lbs (.1 kg)

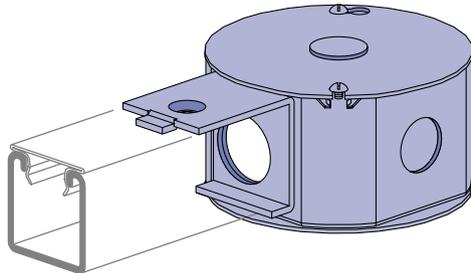
# JUNCTION BOXES

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



**P2810**

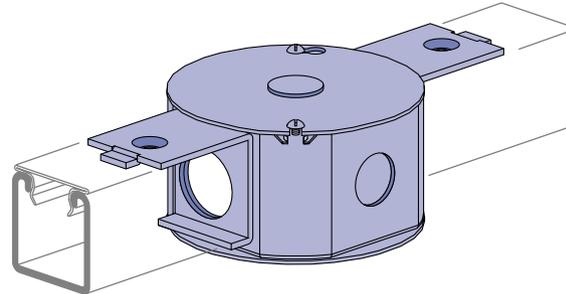
JUNCTION BOX



\* See note below. Wt/C 135 Lbs (61.2 kg)

**P2811**

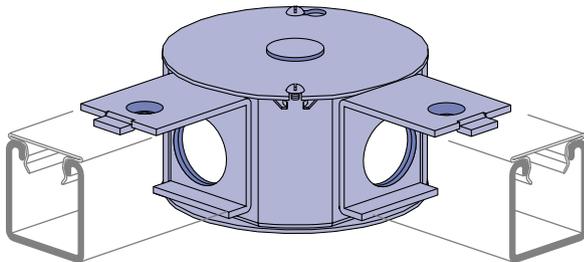
JUNCTION BOX



\* See note below. Wt/C 155 Lbs (70.3 kg)

**P2812**

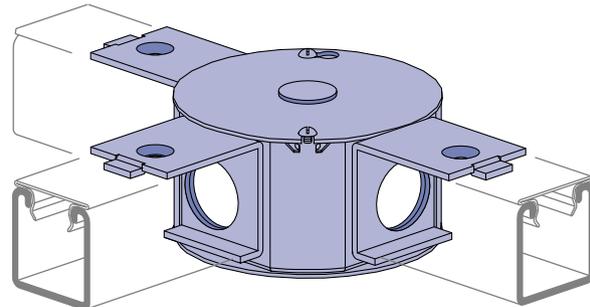
JUNCTION BOX



\* See note below. Wt/C 155 Lbs (70.3 kg)

**P2813**

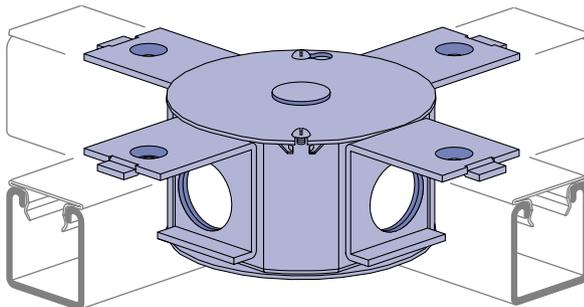
JUNCTION BOX



\* See note below. Wt/C 175 Lbs (79.4 kg)

**P2814**

JUNCTION BOX



\* See note below. Wt/C 195 Lbs (88.5 kg)

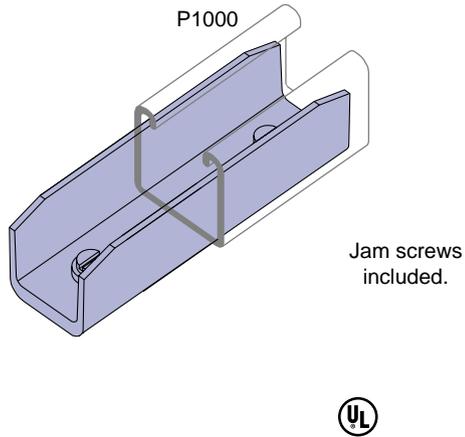
\* All **Junction Boxes** illustrated on this page are:

- UL listed, CSA approved.
- Junction boxes are for P1000, P1100 or P2000 channels.
- All channel entries in box are 1 5/8" (28.6) diameter finished holes with no bushing needed. All knockouts are 7/8" (22.2) diameter.
- 1/4" x 5/8" flat head machine screws and P3016-1420 included.

**IN-CHANNEL JOINERS**  
FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



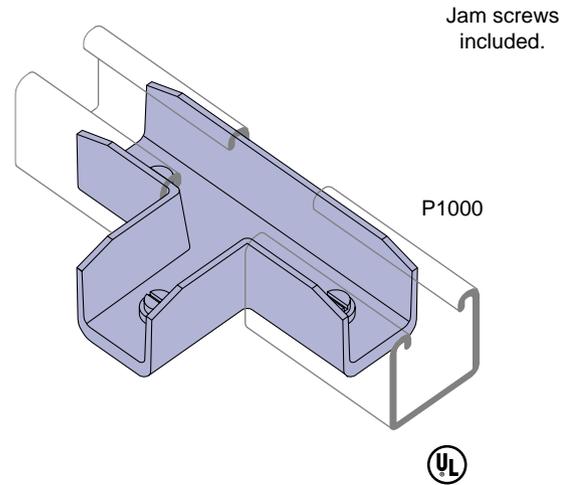
**P2900**



Material: Cast aluminum.

Wt/C 20 Lbs (9.1 kg)

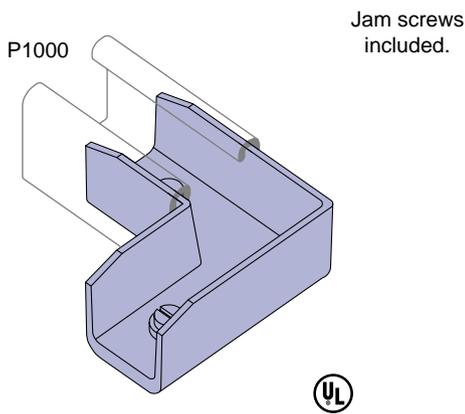
**P2901**



Material: Cast aluminum.

Wt/C 35 Lbs (15.9 kg)

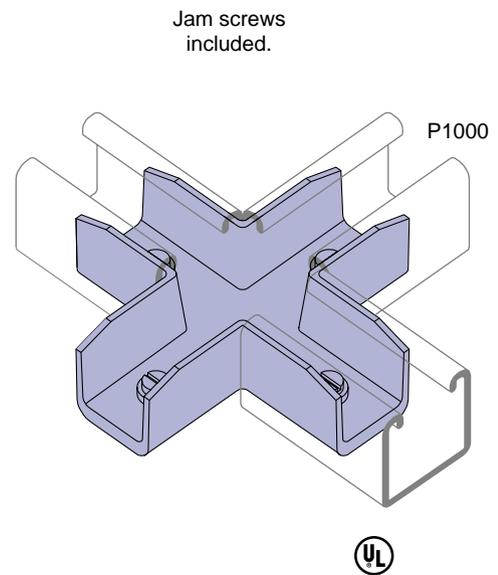
**P2902**



Material: Cast aluminum.

Wt/C 27 Lbs (12.2 kg)

**P2903**



Material: Cast aluminum.

Wt/C 45 Lbs (20.4 kg)

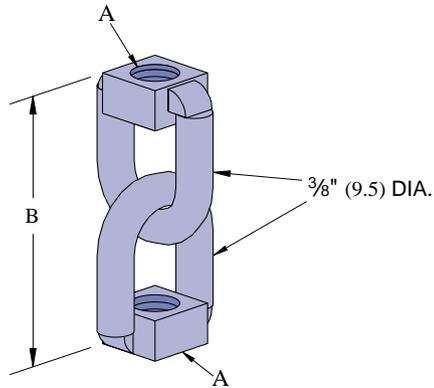
# SWIVEL HANGERS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



**M2037**  
**M2050**

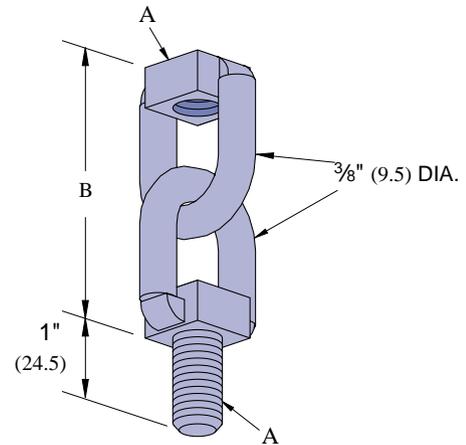
SWIVEL HANGERS



Part Number	"A"	"B"		Weight/C	
		In	mm	Lbs	kg
<b>M2037</b>	3/8" - 16	2 31/32"	67.5	23	10.4
<b>M2050</b>	1/2" - 13	2 3/4"	69.9	32	14.5

**M2137**  
**M2150**

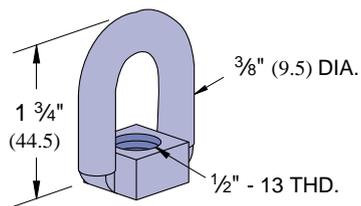
SWIVEL HANGERS



Part Number	"A"	"B"		Weight/C	
		In	mm	Lbs	kg
<b>M2137</b>	3/8" - 16	2 29/32"	67.5	27	12.2
<b>M2150</b>	1/2" - 13	2 3/4"	69.9	45	20.4

**M2250**

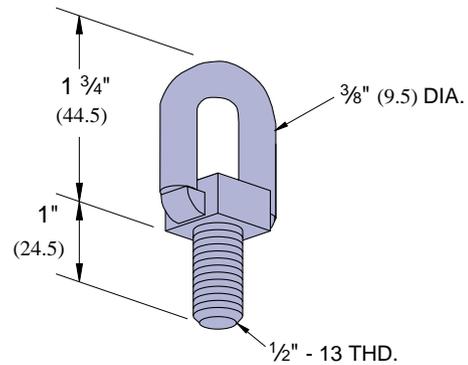
SWIVEL HANGER



Wt/C 18 Lbs (8.2 kg)

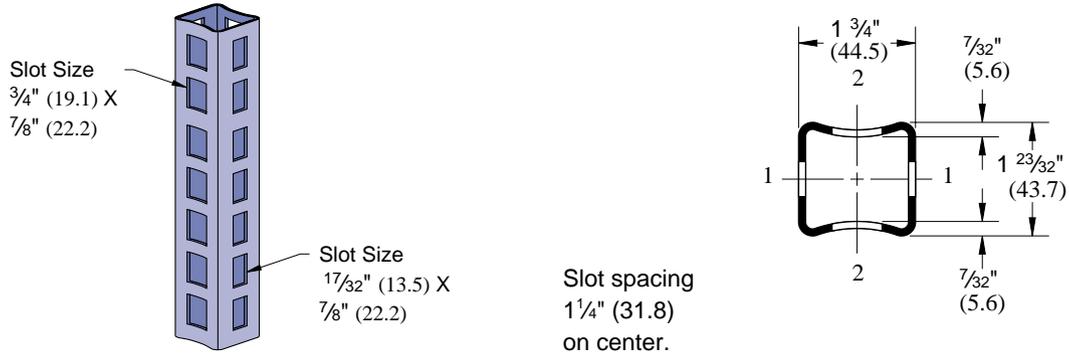
**M2350**

SWIVEL HANGER

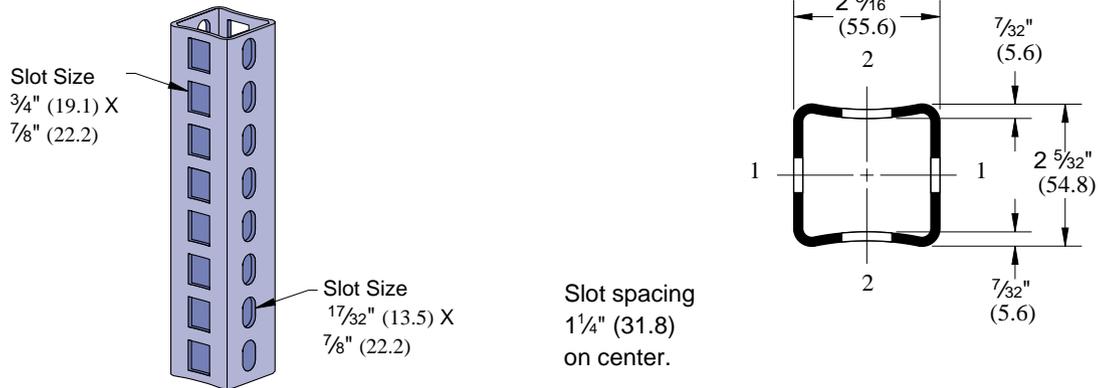


Wt/C 20 Lbs (9.1 kg)

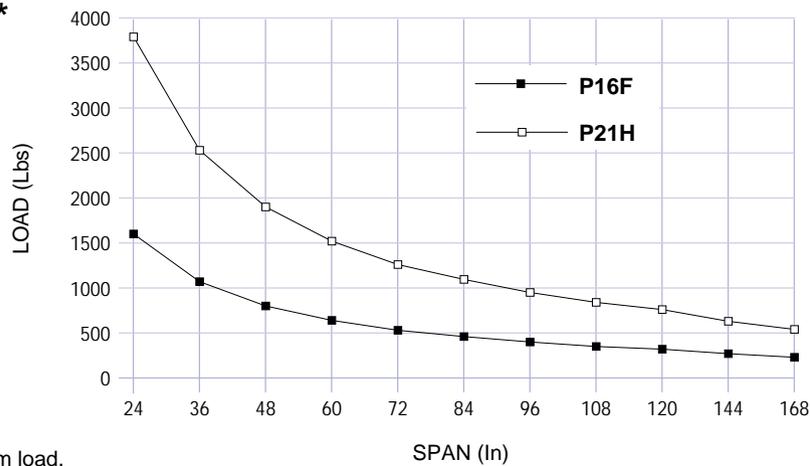
## P16F



## P21H



## BEAM LOAD\*



\* Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N*m	In	mm	10'	20'	PL	GR	HG	PG	SS	AL
P16F	1.78	2.6	4800	540	.105	2.7	■	■	■	■	■	■		
P21H	2.97	4.4	11370	1280	.135	3.4	■	■	■	■	■	■		

## DESIGN LOAD DATA

Span		Channel	Beam Data						Column Data			
			Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Load at Deflection Span/240		Max. Column Load Applied at C.G.*		Max. Design Load Applied at Column Face*	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P16F	1600	7.1	0.06	2	1600	7.1	9600	42.7	3300	14.7
		P21H	3790	16.9	0.05	1	3790	16.9	17700	78.7	6200	27.6
36	914	P16F	1070	4.8	0.13	3	1070	4.8	9000	40.0	3100	13.8
		P21H	2530	11.3	0.11	3	2530	11.3	16900	75.2	6000	26.7
48	1219	P16F	800	3.6	0.23	6	690	3.1	8300	36.9	2900	12.9
		P21H	1900	8.5	0.19	5	1900	8.5	16000	71.2	5700	25.4
60	1524	P16F	640	2.8	0.36	9	440	2.0	7500	33.4	2700	12.0
		P21H	1520	6.8	0.30	8	1280	5.7	15000	66.7	5400	24.0
72	1829	P16F	530	2.4	0.52	13	310	1.4	6600	29.4	2400	10.7
		P21H	1260	5.6	0.42	11	890	4.0	13900	61.8	5100	22.7
84	2134	P16F	460	2.0	0.71	18	220	1.0	5600	24.9	2200	9.8
		P21H	1080	4.8	0.58	15	660	2.9	12600	56.0	4700	20.9
96	2438	P16F	400	1.8	0.93	24	170	0.8	4500	20.0	1900	8.5
		P21H	950	4.2	0.76	19	500	2.2	11300	50.3	4300	19.1
108	2743	P16F	350	1.6	1.18	30	140	0.6	3600	16.0	1600	7.1
		P21H	840	3.7	0.95	24	400	1.8	9900	44.0	3900	17.3
120	3048	P16F	320	1.4	1.45	37	110	0.5	2900	12.9	1400	6.2
		P21H	760	3.4	1.18	30	320	1.4	8300	36.9	3500	15.6
144	3658	P16F	270	1.2	2.09	53	80	0.4	2000	8.9	1100	4.9
		P21H	630	2.8	1.70	43	220	1.0	5800	25.8	2800	12.5
168	4267	P16F	230	1.0	2.85	72	60	0.3	**	**	**	**
		P21H	540	2.4	2.31	59	160	0.7	4230	18.8	2300	10.2

\*K = 0.80      \*\* $\frac{KL}{r} > 200$

### Notes:

- Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
- Long span beams should be supported in such a manner as to prevent rotation and twist.
- Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.

## ELEMENTS OF SECTION

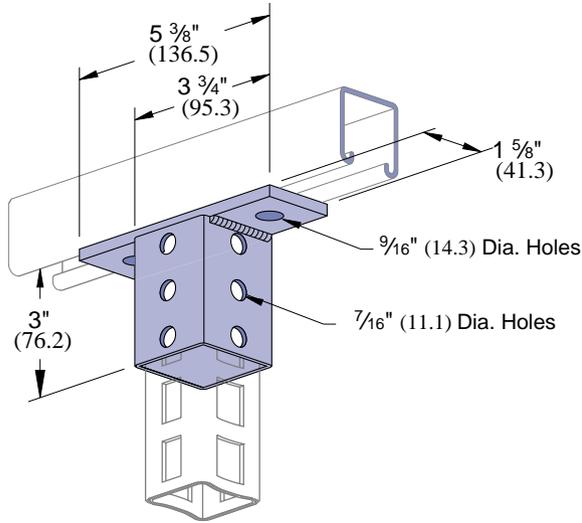
Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In <sup>2</sup>	cm <sup>2</sup>	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm
P16F	.416	2.68	.168	7.0	.192	3.1	.650	1.7	.210	8.7	.240	3.9	.725	1.8
P21H	.749	4.83	.490	20.4	.455	7.5	.820	2.1	.590	24.6	.540	8.8	.900	2.3

I - Moment of Inertia

S - Section Modulus

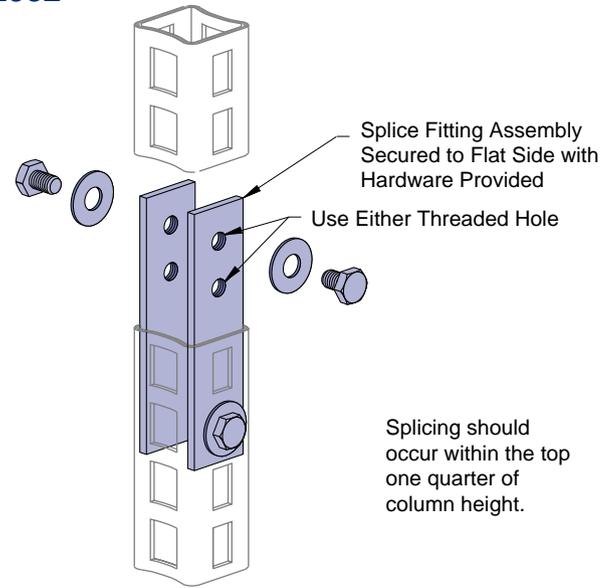
r - Radius of Gyration

## P2820 P2940 CHANNEL/TUBE CONNECTORS



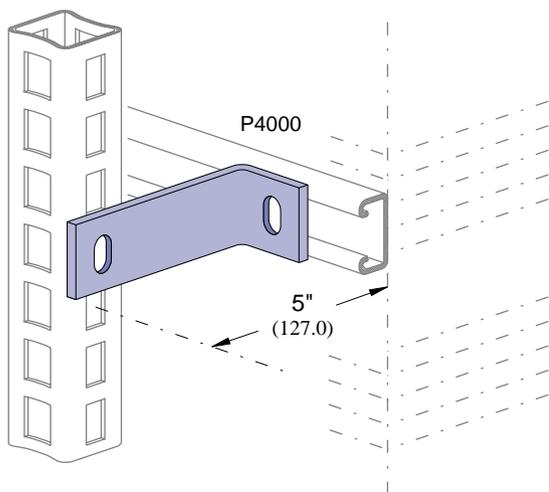
Part Number	Use With	Weight/C	
		Lbs	kg
<b>P2820</b>	P16F	116	52.6
<b>P2940</b>	P21H	148	67.1

## P2822 P2932 SPLICE FITTINGS



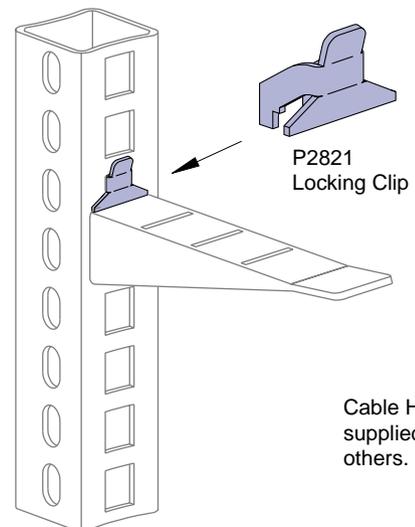
Part Number	Use With	Weight/C	
		Lbs	kg
<b>P2822</b>	P16F	97	44.0
<b>P2932</b>	P21H	122	55.3

## P2823 90° RACK FITTING



Wt/C 66 Lbs (29.9 kg)

## P2821 LOCKING CLIP



Exclusive Cable Hook Locking Clip prevents Cable Hook removal.

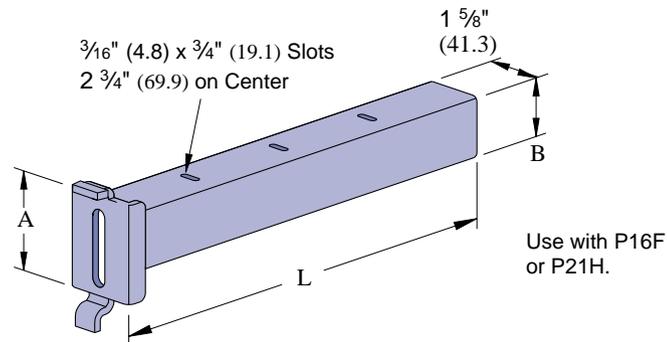
Wt/C 3 Lbs (1.4 kg)

# CABLE ENTRANCE BRACKETS



## P2920 thru P2924

## CABLE BRACKETS



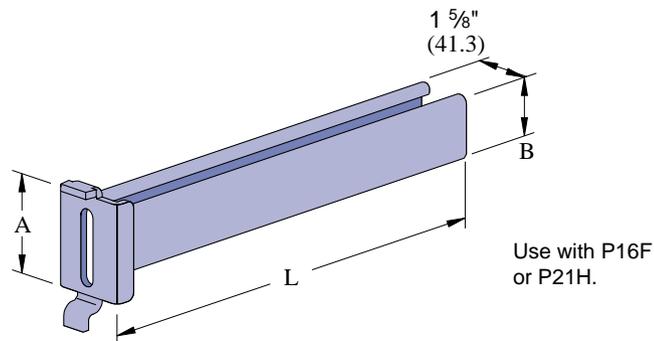
Material: 12 gage steel.

Part Number	"L"		"A"		"B"		Weight/C		Uniform Design Load	
	In	mm	In	mm	In	mm	Lbs	kg	Lbs	kN
<b>P2920</b>	5½	139.7	3½	88.9	7⁄8	22.2	90	40.8	500	2.2
<b>P2921</b>	8¼	209.6	3½	88.9	7⁄8	22.2	120	54.4	325	1.4
<b>P2922</b>	11	279.4	3½	88.9	1⅝	41.3	300	136.1	275	1.2
<b>P2923</b>	13¾	349.3	3½	88.9	1⅝	41.3	340	154.2	220	1.0
<b>P2924</b>	19¼	489.0	3½	88.9	1⅝	41.3	430	195.0	160	0.7

Safety factor of 3.

## P2928 P2929 P2930

## CABLE BRACKETS



Material: 12 gage steel.

Part Number	"L"		"A"		"B"		Weight/C		Uniform Design Load	
	In	mm	In	mm	In	mm	Lbs	kg	Lbs	kN
<b>P2928</b>	6	152.4	3½	88.9	7⁄8	22.2	92	41.7	500	2.2
<b>P2929</b>	12	304.8	3½	88.9	1⅝	41.3	320	145.1	250	1.1
<b>P2930</b>	18	457.2	3½	88.9	1⅝	41.3	420	190.5	170	0.8

Safety factor of 3.

	Page
Heavy-Duty Inserts	170
Standard-Duty Inserts	172
Light-Duty Inserts	174
Spot Inserts	176
End Caps and Accessories	178
Hardware	179



## MATERIAL

Cold-formed inserts are manufactured from standard 12 Gage (2.7 mm) Unistrut channel sections conforming to ASTM A570 GR 33 or ASTM A653 GR 33, unless otherwise noted.

Hot-rolled inserts, as noted, are manufactured from carbon steel meeting physical requirements of ASTM A283 GR D.

To inhibit concrete seepage, all inserts (except spot inserts) are provided with closure and end caps or foam filler, unless otherwise requested.

Most concrete inserts are also available in stainless steel on special order. Consult factory for ordering information.

## APPLICATION

A wide range of heavy-duty to light-duty “continuous” and “spot” concrete inserts is available for use in pre-cast, pre-stressed or poured-in-place concrete floors, walls or ceilings.

## FINISHES

Cold-formed, standard-duty, light-duty and spot concrete inserts in this section are available in Perma-Green II (GR), hot dipped galvanized (HG), conforming to ASTM A123 or A153; Pre-galvanized (PG), conforming to ASTM A653 GR 33 and plain (PL).

Hot-rolled inserts are hot-dipped galvanized (HG) conforming to ASTM A123 or A153.

## DESIGN LOAD

Design loads, where shown, are based on 3,000 PSI concrete, unless noted.

## STANDARD LENGTHS

Insert lengths range from 3 inches (76 mm) to 20 feet (6.10m) with a tolerance of  $\pm\frac{1}{4}$ -inch (6.4mm).

## DIMENSIONS

Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

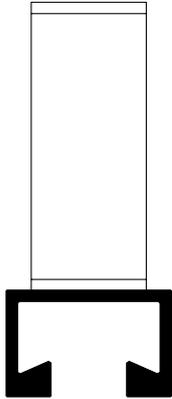
Custom-designed inserts are available on special order. Consult factory for ordering information.

# CONCRETE INSERT SELECTION CHART

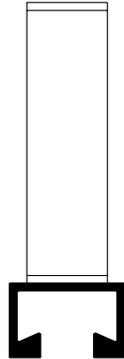


## HEAVY DUTY CONCRETE INSERTS

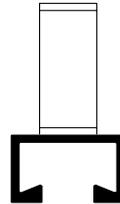
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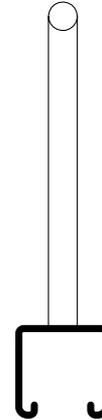
P3780  
Series



P3770  
Series



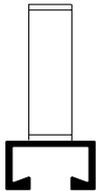
P3760  
Series



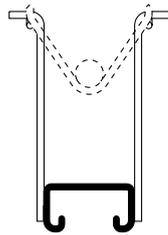
P3754

## STANDARD DUTY CONCRETE INSERTS

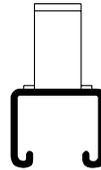
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P3740  
Series



P3170  
Series



P3270  
Series

## LIGHT DUTY CONCRETE INSERTS

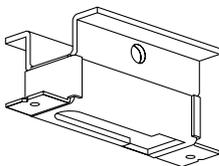
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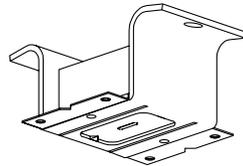
P3370  
Series

## SPOT INSERTS

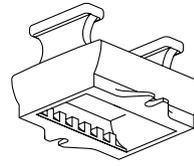
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P3245



M24



M26

## LOAD CHART BY LENGTH

Insert Length In/mm	Part Number	Weight/C		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
		Lbs	kg	In	mm	Lbs	kN	In	mm	Lbs	kN
Spot Inserts	M26/M2812	54	24.5	–	–	1500	6.6	–	–	1500	6.6
	M3245	52	23.6	–	–	1000	4.4	–	–	1000	4.4
	M24/M2512	52	23.6	–	–	800	3.5	–	–	800	3.5
3" (76)	P3249	85	38.6	3	76	500	2.2	–	–	500	2.2
	P3349	68	30.8	3	76	400	1.8	–	–	400	1.8
4" (102)	P3250	100	45.4	4	102	800	3.6	–	–	800	3.6
	P3350	81	36.7	4	102	500	2.2	–	–	500	2.2
6" (152)	P3782-6	467	211.8	4	102	8000	35.6	–	–	8000	35.6
	P3772-6	307	139.3	4	102	6000	26.7	–	–	6000	26.7
	P3762-6	153	69.4	4	102	2800	12.5	–	–	2800	12.5
	P3742-6	103	46.7	4	102	2500	11.1	–	–	2500	11.1
	P3251	130	59.0	6	152	1000	4.4	–	–	1000	4.4
8" (203)	P3351	102	46.3	6	152	750	3.3	–	–	750	3.3
	P3782-8	569	258.1	6	152	8000	35.6	–	–	8000	35.6
	P3772-8	366	166.0	6	152	6000	26.7	–	–	6000	26.7
	P3762-8	192	87.1	6	152	2800	12.5	–	–	2800	12.5
	P3742-8	128	58.1	6	152	2500	11.1	–	–	2500	11.1
10" (254)	P3252	159	72.1	8	203	1200	5.4	–	–	1200	5.4
	P3352	122	55.3	8	203	1000	4.4	–	–	1000	4.4
	P3783-10	752	341.1	4	102	7700	34.3	4	102	10000	44.5
	P3782-10	671	304.4	8	203	7700	34.3	–	–	7700	34.3
	P3773-10	490	222.3	4	102	5500	24.5	4	102	7000	31.1
	P3772-10	425	192.8	8	203	5500	24.5	–	–	5500	24.5
	P3763-10	249	112.9	4	102	2800	12.5	4	102	5000	22.2
12" (305)	P3743-10	167	75.8	4	102	2300	10.2	4	102	4500	20.0
	P3762-10	230	104.3	8	203	2800	12.5	–	–	2800	12.5
	P3742-10	152	68.9	8	203	2300	10.2	–	–	2300	10.2
	P3783-12	854	387.4	5	127	7700	34.3	5	127	10000	44.5
	P3773-12	549	249.0	5	127	5500	24.5	5	127	8500	37.8
	P3782-12	773	350.6	10	254	7700	34.3	–	–	7700	34.3
	P3772-12	484	219.5	10	254	5500	24.5	–	–	5500	24.5
16" (406)	P3763-12	288	130.6	5	127	2800	12.5	5	127	5000	22.2
	P3754	210	95.3	8	203	2500	11.1	3	76	5000	22.2
	P3743-12	192	87.1	5	127	2300	10.2	5	127	4500	20.0
	P3762-12	269	122.0	10	254	2800	12.5	–	–	2800	12.5
	P3742-12	177	80.3	10	254	2300	10.2	–	–	2300	10.2
	P3253	227	103.0	4	102	2000	8.9	–	–	2000	8.9
	P3353	174	78.9	4	102	1500	6.7	–	–	1500	6.7
18" (457)	P3254	270	122.5	4	102	2000	8.9	12	305	4000	17.8
	P3354	185	83.9	4	102	1500	6.7	12	305	3000	13.3
20" (508)	P3783-18	1159	525.7	8	203	7700	34.3	8	203	15400	68.5
	P3773-18	725	328.9	8	203	5500	24.5	8	203	11000	48.9
	P3763-18	403	182.8	8	203	2800	12.5	8	203	5500	24.5
	P3743-18	265	120.2	8	203	2300	10.2	8	203	4200	18.7
20" (508)	P3255	357	161.9	4	102	2000	8.9	12	305	4000	17.8
	P3355	231	104.8	4	102	1500	6.7	12	305	3000	13.3

## LOAD CHART BY LENGTH (continued)

Insert Length In/mm	Part Number	Weight/C		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
		Lbs	kg	In	mm	Lbs	kN	In	mm	Lbs	kN
24" (610)	<b>P3783-24</b>	1463	663.8	11	279	7700	34.3	10	254	15400	68.5
	<b>P3773-24</b>	903	409.7	11	279	5500	24.5	10	254	11000	48.9
	<b>P3763-24</b>	519	235.5	11	279	2800	12.5	10	254	5500	24.5
	<b>P3743-24</b>	339	153.8	11	279	2300	10.2	10	254	4200	18.7
	<b>P3256</b>	399	181.0	4	102	2000	8.9	12	305	4000	17.8
	<b>P3356</b>	277	125.6	4	102	1500	6.7	12	305	3000	13.3

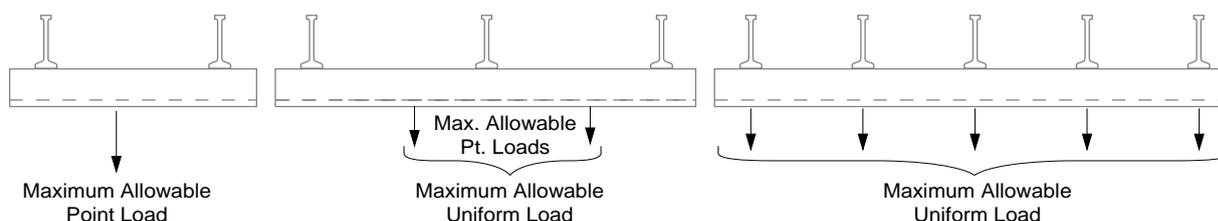
## CONTINUOUS CONCRETE INSERT LOAD CHART: Lbs/Ft (kg/m)

Insert Length In/mm	Concrete Insert (Series)	Weight		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
		Lbs/C Ft	kg/100m	In	mm	Lbs	kN	In	mm	Lbs/Ft	kN/m
Continuous Concrete Inserts	<b>P3780</b>	713	1061.1	10	254	7700	34.3	10	254	9400	137.2
	<b>P3770</b>	435	647.5	10	254	5500	24.5	10	254	6700	97.7
	<b>P3760</b>	255	379.5	10	254	2800	12.5	10	254	3400	49.5
	<b>P3740</b>	166	247.0	10	254	2300	10.2	10	254	2800	40.9
	<b>P3270</b>	194	288.6	4	102	2000	8.9	12	305	2000	29.2
	<b>P3370</b>	139	206.6	4	102	1500	6.7	12	305	1500	14.4
	<b>P3170*</b>	165	245.5	8	203	1000	4.4	12	305	1000	22.7

Load data is based on use of 3000 PSI concrete.

\*When used in pre-stressed concrete "T" Beam.

## LOADING CONDITIONS

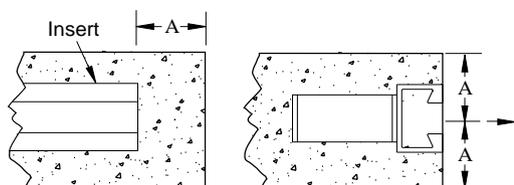


The maximum allowable point load may be placed anywhere along the insert.\* The maximum allowable uniform load must be placed as a series of point loads with the minimum spacing

between point loads as listed; where no single point load may exceed the maximum allowable point load.

\* All loads placed less than 2" from the end of an insert must be reduced by 50%.

## MINIMUM EDGE DISTANCE TO ACHIEVE RATED PULL-OUT CAPACITY



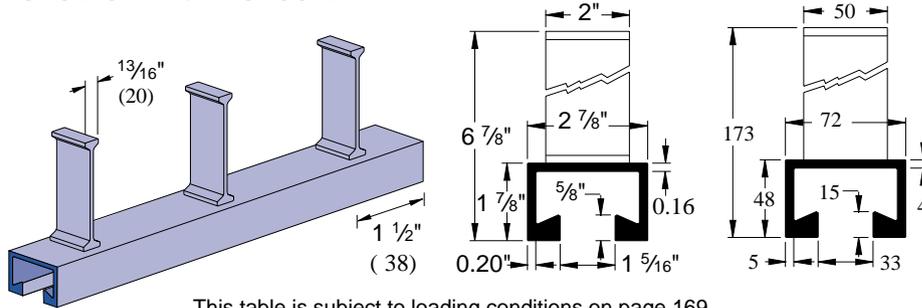
Concrete Insert Series	Edge Distance "A"	
	In	mm
<b>P3170</b>	1 7/8	48
<b>P3740</b>	3	76
<b>P3270</b>	3	76
<b>P3370</b>	3	76

Concrete Insert Series	Edge Distance "A"	
	In	mm
<b>P3754</b>	3	76
<b>P3760</b>	4	102
<b>P3770</b>	5	127
<b>P3780</b>	6 1/2	165

# HEAVY DUTY CONCRETE INSERTS



## P3782-6 thru P3783-24



This table is subject to loading conditions on page 169.

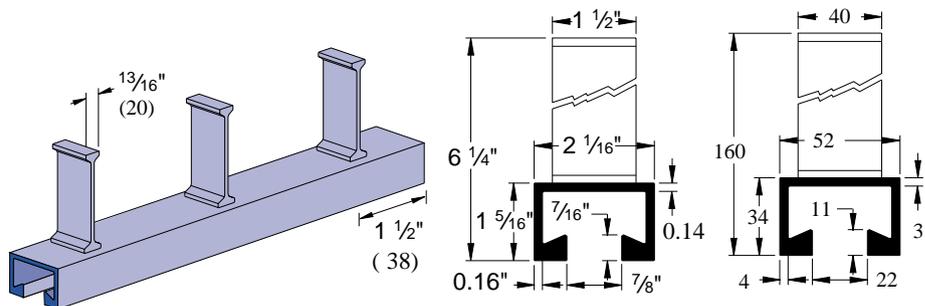
## P3780 SERIES HEAVY DUTY CONCRETE INSERT

- For all attachments "T" head bolts are required (see page 179).
- Furnished with foam filler in place.
- This insert is not intended for use with metal framing components.
- **Maximum distance between insert end and anchor center must not exceed 1 1/2" (38).**

Material: Hot formed steel.

Insert Length		No. of Anchors	Part Number	Weight/C		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
In	mm			Lbs	kg	In	mm	Lbs	kN	In	mm	Lbs	kN
6	152	2	<b>P3782-6</b>	467	211.8	4	102	8000	35.6	—	—	8000	35.6
8	203		<b>P3782-8</b>	569	258.1	6	152	8000	35.6	—	—	8000	35.6
10	254		<b>P3782-10</b>	671	304.4	8	203	7700	34.3	—	—	7700	34.3
12	305		<b>P3782-12</b>	773	350.6	10	254	7700	34.3	—	—	7700	34.3
10	254	3	<b>P3783-10</b>	752	341.1	4	102	7700	34.3	4	102	10000	44.5
12	305		<b>P3783-12</b>	854	387.4	5	127	7700	34.3	5	127	10000	44.5
18	457		<b>P3783-18</b>	1159	525.7	8	203	7700	34.3	8	203	15400	68.5
24	610		<b>P3783-24</b>	1463	663.8	11	279	7700	34.3	10	254	15400	68.5
Continuous			<b>P3780 Series</b>	7.1 Lbs/Ft	10.6 kg/m	10	254	7700	34.3	10	254	9400 Lbs/Ft	137.2 kN/m

## P3772-6 thru P3773-24



This table is subject to loading conditions on page 169.

## P3770 SERIES HEAVY DUTY CONCRETE INSERT

- For all attachments "T" head bolts are required (see page 179).
- Furnished with foam filler in place.
- Many metal framing components are not compatible. Verify before use.
- **Maximum distance between insert end and anchor center must not exceed 1 1/2" (38).**

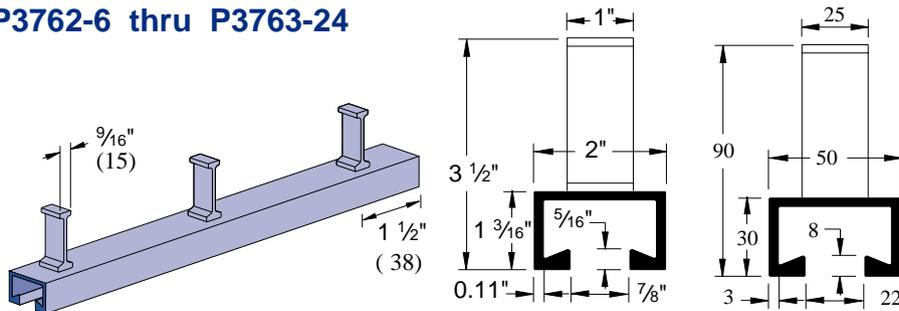
Material: Hot formed steel.

Insert Length		No. of Anchors	Part Number	Weight/C		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
In	mm			Lbs	kg	In	mm	Lbs	kN	In	mm	Lbs	kN
6	152	2	<b>P3772-6</b>	307	139.3	4	102	6000	26.7	—	—	6000	26.7
8	203		<b>P3772-8</b>	366	166.0	6	152	6000	26.7	—	—	6000	26.7
10	254		<b>P3772-10</b>	425	192.8	8	203	5500	24.5	—	—	5500	24.5
12	305		<b>P3772-12</b>	484	219.5	10	254	5500	24.5	—	—	5500	24.5
10	254	3	<b>P3773-10</b>	490	222.3	4	102	5500	24.5	4	102	7000	31.1
12	305		<b>P3773-12</b>	549	249.0	5	127	5500	24.5	5	127	8500	37.8
18	457		<b>P3773-18</b>	725	328.9	8	203	5500	24.5	8	203	11000	48.9
24	610		<b>P3773-24</b>	903	409.7	11	279	5500	24.5	10	254	11000	48.9
Continuous			<b>P3770 Series</b>	4.5 Lbs/Ft	6.5 kg/m	10	254	5500	24.5	10	254	6700 Lbs/Ft	97.7 kN/m

# HEAVY DUTY CONCRETE INSERTS



## P3762-6 thru P3763-24



## P3760 SERIES HEAVY DUTY CONCRETE INSERT

- For all attachments "T" head bolts are required (see page 179).
- Furnished with foam filler in place.
- Many metal framing components are not compatible. Verify before use.
- **Maximum distance between insert end and anchor center must not exceed 1 1/2" (38).**

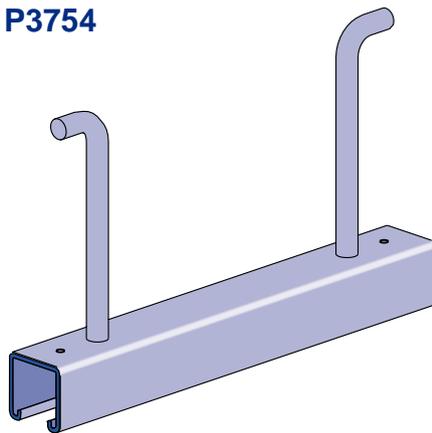
This table is subject to loading conditions on page 169.

Material: Hot formed steel.

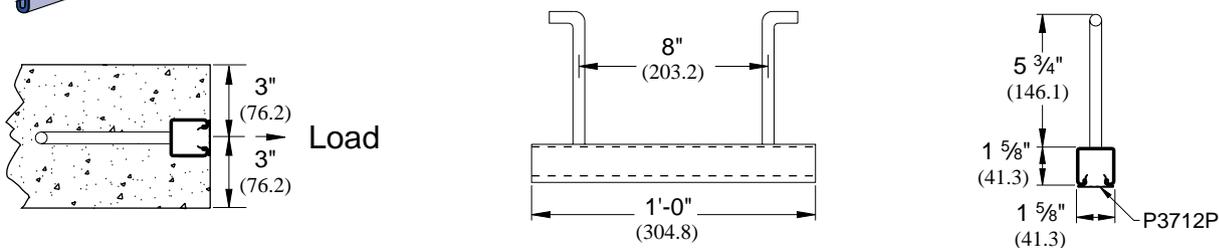
Insert Length		No. of Anchors	Part Number	Weight/C		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
In	mm			Lbs	kg	In	mm	Lbs	kN	In	mm	Lbs	kN
6	152	2	<b>P3762-6</b>	153	69.4	4	102	2800	12.5	—	—	2800	12.5
8	203		<b>P3762-8</b>	192	87.1	6	152	2800	12.5	—	—	2800	12.5
10	254		<b>P3762-10</b>	230	104.3	8	203	2800	12.5	—	—	2800	12.5
12	305		<b>P3762-12</b>	269	122.0	10	254	2800	12.5	—	—	2800	12.5
10	254	3	<b>P3763-10</b>	249	112.9	4	102	2800	12.5	4	102	5000	22.2
12	305		<b>P3763-12</b>	288	130.6	5	127	2800	12.5	5	127	5000	22.2
18	457		<b>P3763-18</b>	403	182.8	8	203	2800	12.5	8	203	5500	24.5
24	610		<b>P3763-24</b>	519	235.5	11	279	2800	12.5	10	254	5500	24.5
Continuous			<b>P3760 Series</b>	2.6 Lbs/Ft	3.8 kg/m	10	254	2800	12.5	10	254	3400 Lbs/Ft	49.5 kN/m

## P3754

## HEAVY DUTY CONCRETE INSERT



- Use with P1010 nuts.
- A styrene bead end cap that fits inside the channel to inhibit concrete seepage included.
- Closure strip P3712 P included.
- All nuts and fittings for P3200 series concrete inserts will fit.
- The recommended design load when used for curtain wall anchorage is 5,000 pounds and is based on use in average, good concrete. The design load includes 1/3 increase in load as permitted by AISI Specifications and Uniform Building Code when stresses are produced by wind or earthquake and other loads..
- The recommended design load is based on using 2 P1010 nuts at no less than 3" O.C. and no closer than 2" to either end of the insert. The distance between the insert centerline and the concrete edge must be a minimum of 3"

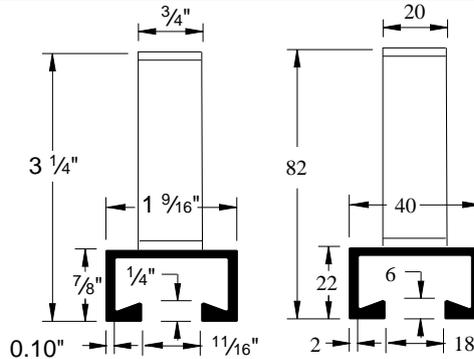
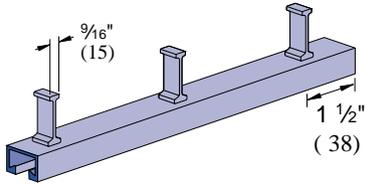


Insert Length		Part Number	Weight/C		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
In	mm		Lbs	kg	In	mm	Lbs	kN	In	mm	Lbs	kN
12	304.8	<b>P3754</b>	210	95.3	8	203.2	2500	11.1	3	76.2	5000	22.2

# STANDARD DUTY CONCRETE INSERTS



## P3742-6 thru P3743-24



## P3740 SERIES STANDARD DUTY CONCRETE INSERT

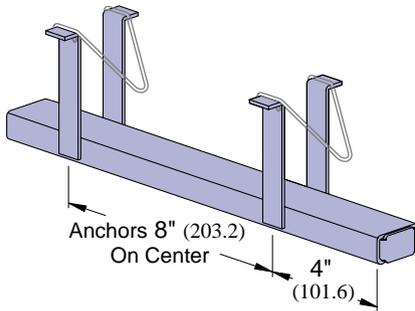
- For all attachments "T" head bolts are required (see page 179).
- Furnished with foam filler in place.
- Many metal framing components are not compatible. Verify before use.
- **Maximum distance between insert end and anchor center must not exceed 1 1/2" (38).**

This table is subject to loading conditions on page 169.

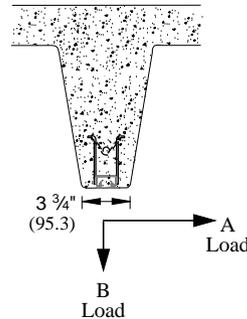
Material: Hot formed steel.

Insert Length		No. of Anchors	Part Number	Weight/C		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
In	mm			Lbs	kg	In	mm	Lbs	kN	In	mm	Lbs	kN
6	152	2	<a href="#">P3742-6</a>	103	46.7	4	102	2500	11.1	—	—	2500	11.1
8	203		<a href="#">P3742-8</a>	128	58.1	6	152	2500	11.1	—	—	2500	11.1
10	254		<a href="#">P3742-10</a>	152	68.9	8	203	2300	10.2	—	—	2300	10.2
12	305		<a href="#">P3742-12</a>	177	80.3	10	254	2300	10.2	—	—	2300	10.2
10	254	3	<a href="#">P3743-10</a>	167	75.8	4	102	2300	10.2	4	102	4500	20.0
12	305		<a href="#">P3743-12</a>	192	87.1	5	127	2300	10.2	5	127	4500	20.0
18	457		<a href="#">P3743-18</a>	265	120.2	8	203	2300	10.2	8	203	4200	18.7
24	610		<a href="#">P3743-24</a>	339	153.8	11	279	2300	10.2	10	254	4200	18.7
Continuous			<a href="#">P3740 Series</a>	1.7 Lbs/Ft	2.5 kg/m	10	254	2300	10.2	10	254	2800 Lbs/Ft	40.9 kN/m

## P3165 P3170



## INSERT FOR PRE-STRESSED CONCRETE



- P2865 spring sold separately.
- Use channel nuts designed for P3300. See pages 70 to 74.

Maximum allowable load/Ft.

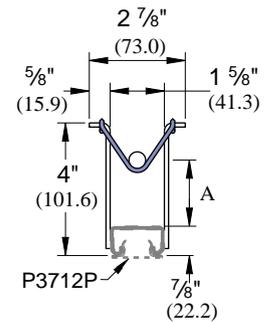
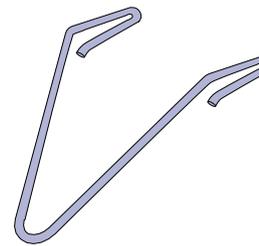
Concrete	A		B	
	Lbs	Kn	Lbs	Kn
Light Weight	425	1.9	800	3.6
Normal Weight	500	2.2	1000	4.4

Safety factor 3.

Part Number	Length		Weight/C	
	Ft	mm	Lbs	kg
<a href="#">P3165</a>	10	3048	1650	748.4
<a href="#">P3170</a>	20	6096	3280	1487.8

## P2865-10 P2865-15 P2865-20

## HOLD DOWN SPRING FOR PRE-STRESSED CONCRETE INSERT



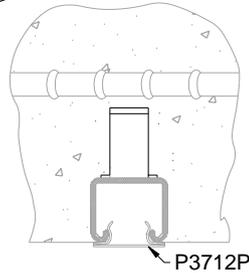
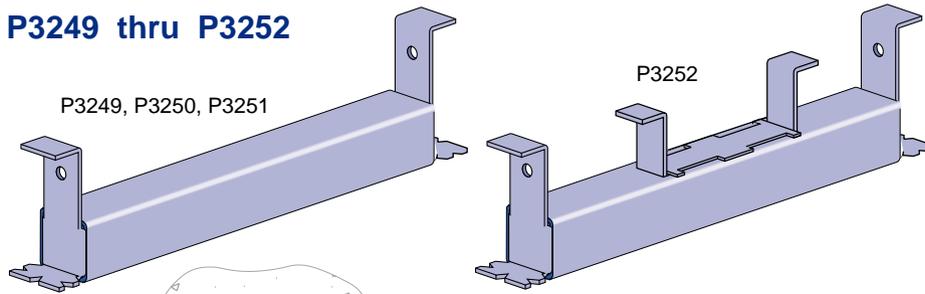
- For use with P3165 and P3170 inserts. Recommended for use on every other anchor to hold inserts in place.

Part Number	"A"		Weight/C	
	In	mm	Lbs	kg
<a href="#">P2865-10</a>	1	25.4	2	.9
<a href="#">P2865-15</a>	1 1/2	38.1	2	.9
<a href="#">P2865-20</a>	2	50.8	2	.9

# STANDARD DUTY CONCRETE INSERTS



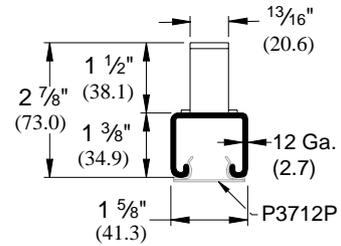
## P3249 thru P3252



Use channel nuts designed for P3000. See pages 70 to 74.

(When used for sprinkler systems only.)

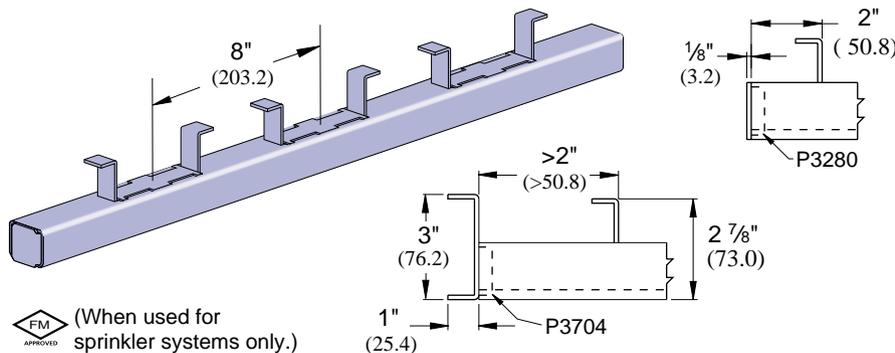
## P3270 SERIES CONCRETE INSERTS



Insert Length		Part Number	Weight/C		Max. Allowable Point Load*		Max. Allowable Uniform Load*	
In	mm		Lbs	kg	Lbs	kN	Lbs	kN
3	76	<b>P3249</b>	85	38.6	500	2.2	500	2.2
4	102	<b>P3250</b>	100	45.4	800	3.6	800	3.6
6	152	<b>P3251</b>	130	59.0	1000	4.4	1000	4.4
8	203	<b>P3252</b>	159	72.1	1200	5.4	1200	5.4

\*Safety factor of 3

## P3253 thru P3270



(When used for sprinkler systems only.)

## P3270 SERIES CONCRETE INSERTS

- Use channel nuts designed for P3000 channel (See page 70 to 74).
- P3280 end cap used when distance to first anchor is up to 2" (50.8 mm).
- P3704 end cap is used when end distance to first anchor is over 2" (50.8 mm).
- Nail or anchor inserts to forms every 16 (406 mm) to 24 (610 mm) inches.
- Includes closure and end caps unless otherwise requested.

Insert Length		Part Number	Weight/C		Max. Allowable Point Load*		Min. Spacing Between Point Loads		Max. Allowable Uniform Load*	
In/Ft	mm		Lbs	kg	Lbs	kN	In	mm	Lbs	kN
12"	305	<b>P3253</b>	227	103.0	2000	8.9	—	—	2000	8.9
16"	406	<b>P3254</b>	270	122.5	2000	8.9	12	305	4000	17.8
20"	508	<b>P3255</b>	357	161.9	2000	8.9	12	305	4000	17.8
24"	610	<b>P3256</b>	399	181.0	2000	8.9	12	305	4000	17.8
32"	813	<b>P3257</b>	527	239.0	2000	8.9	12	305	2000	29.2
36"	914	<b>P3257A</b>	616	279.4						
40"	1016	<b>P3258</b>	661	299.8						
4'	1219	<b>P3259</b>	786	356.5						
5'	1524	<b>P3260</b>	1003	455.0						
6'	1829	<b>P3261</b>	1173	532.1						
7'	2134	<b>P3262</b>	1390	630.5						
8'	2438	<b>P3263</b>	1560	707.6						
9'	2743	<b>P3264</b>	1741	789.7						
10'	3048	<b>P3265</b>	1947	883.1						
12'	3658	<b>P3266</b>	2334	1058.7	Lbs per Ft	kN per meter				
14'	4267	<b>P3267</b>	2717	1232.4						
16'	4877	<b>P3268</b>	3116	1413.4						
18'	5486	<b>P3269</b>	3530	1601.2						
20'	6096	<b>P3270</b>	3882	1760.8						

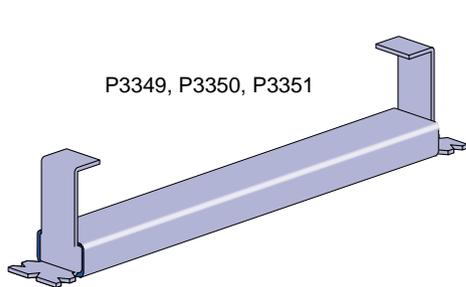
\*Safety factor of 3

# LIGHT DUTY CONCRETE INSERTS

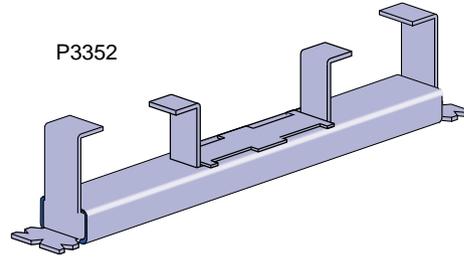


## P3349 thru P3352

## P3370 SERIES CONCRETE INSERTS



P3349, P3350, P3351

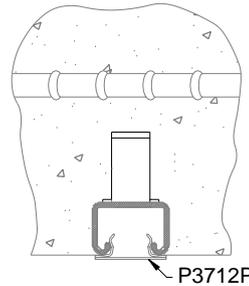


P3352

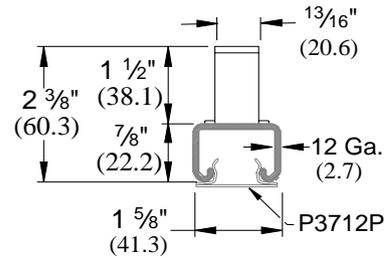


(When used for  
sprinkler systems only.)

Use channel nuts designed for  
P3300. See pages 70 to 74.



P3712P



Insert Length		Part Number	Weight/C		Max. Allowable Point Load		Max. Allowable Uniform Load	
In	mm		Lbs	kg	Lbs	kN	Lbs	kN
3	76	<b>P3349</b>	68	30.1	400	1.8	400	1.8
4	102	<b>P3350</b>	81	36.7	500	2.2	500	2.2
6	152	<b>P3351</b>	102	46.3	750	3.3	750	3.3
8	203	<b>P3352*</b>	122	55.3	1000	4.4	1000	4.4

\*P3352 has punched out anchors.

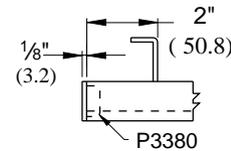
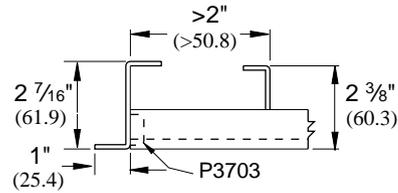
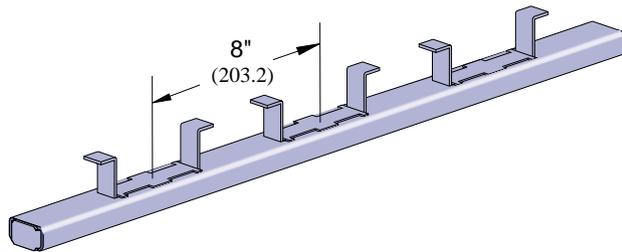
Safety factor of 3.

# LIGHT DUTY CONCRETE INSERTS



## P3353 thru P3370

## P3370 SERIES CONCRETE INSERTS



- Use channel nuts designed for P3300 channel (See page #70 to 74).
- P3380 end cap used when distance to first anchor is up to 2" (50.8 mm).
- P3703 end cap is used when end distance to first anchor is over 2" (50.8 mm).
- Nail or anchor inserts to forms every 16 (406 mm) to 24 (610 mm) inches.
- Includes closure and end caps unless otherwise requested.

 (When used for sprinkler systems only.)

Insert Length		Part Number	Weight/C		Max. Allowable Point Load*		Min. Spacing Between Point Loads		Max. Allowable Uniform Load*	
In/Ft	mm		Lbs	kg	Lbs	kN	In	mm	Lbs	kN
12"	305	<b>P3353</b>	174	78.9	1500	6.7	—	—	1500	6.7
16"	406	<b>P3354</b>	185	83.9	1500	6.7	12	305	3000	13.3
20"	508	<b>P3355</b>	231	104.8	1500	6.7	12	305	3000	13.3
24"	610	<b>P3356</b>	277	125.6	1500	6.7	12	305	3000	13.3
32"	813	<b>P3357</b>	370	167.8	1500	6.7	12	305	1500	6.7
36"	914	<b>P3357A</b>	416	188.7						
40"	1016	<b>P3358</b>	463	210.0						
4'	1219	<b>P3359</b>	555	251.7						
5'	1524	<b>P3360</b>	694	314.8						
6'	1829	<b>P3361</b>	832	377.4						
7'	2134	<b>P3362</b>	971	440.4						
8'	2438	<b>P3363</b>	1110	503.5						
9'	2743	<b>P3364</b>	1249	566.5						
10'	3048	<b>P3365</b>	1387	629.1						
12'	3658	<b>P3366</b>	1665	755.2	1500 Lbs per Ft	21.9 kN per meter				
14'	4267	<b>P3367</b>	1942	880.9						
16'	4877	<b>P3368</b>	2220	1007.0						
18'	5486	<b>P3369</b>	2497	1132.6						
20'	6096	<b>P3370</b>	2775	1258.7						

\*Safety factor of 3.

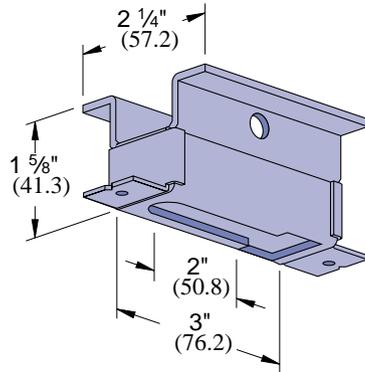
# SPOT CONCRETE INSERTS & ACCESSORIES

FOR 1 5/8" (41.3) WIDTH SERIES CHANNEL



## P3245

SPOT INSERT



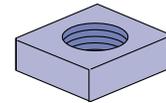
- For 1/4", 3/8", or 1/2" size attachment or hanger rod.
- Insert nuts to be ordered separately.
- Safety factor of 3.

Finish: Pre-galvanized.

Part Number	Weight/C		Max. Allowable Point Load	
	Lbs	kg	Lbs	kN
<b>P3245</b>	54	24.5	1000	4.4

## P3245-N4 P3245-N6 HSQN050

SQUARE NUT  
FOR P3245 INSERT

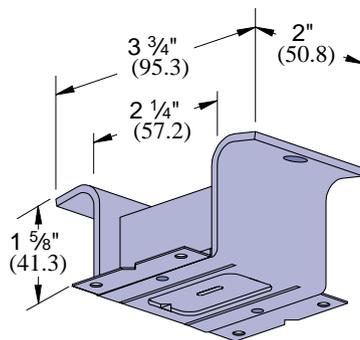


Finish: Electro-galvanized.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
<b>P3245-N4</b>	1/4 - 20	6	2.6
<b>P3245-N6</b>	3/8 - 16	5	2.3
<b>HSQN050</b>	1/2 - 13	6	2.6

## M24

SPOT INSERT



(When used for sprinkler systems only.)

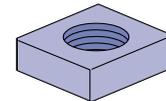
- Ribs along sides of slot give extra strength to case.
- Insert nuts M2506 thru M2524 to be ordered separately.
- Safety factor of 5.

Finish: Electro-galvanized.

Part Number	Weight/C		Max. Allowable Point Load	
	Lbs	kg	Lbs	kN
<b>M24</b>	52	23.6	800	3.6

## M2506 thru M2524

SQUARE NUT  
FOR M24



Finish: Electro-galvanized.

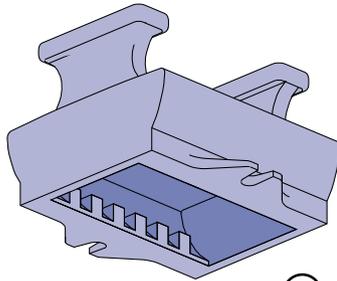
Part Number	Size/ Thread	Weight/C	
		Lbs	kg
<b>M2506</b>	1/4 - 20	13	5.9
<b>M2508</b>	3/8 - 16	14	6.4
<b>M2510</b>	1/2 - 13	14	6.4
<b>M2512</b>	5/8 - 11	12	5.4
<b>M2523</b>	3/4 - 10	11	5.0
<b>M2524</b>	7/8 - 9	10	4.5

# SPOT CONCRETE INSERTS & ACCESSORIES

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL



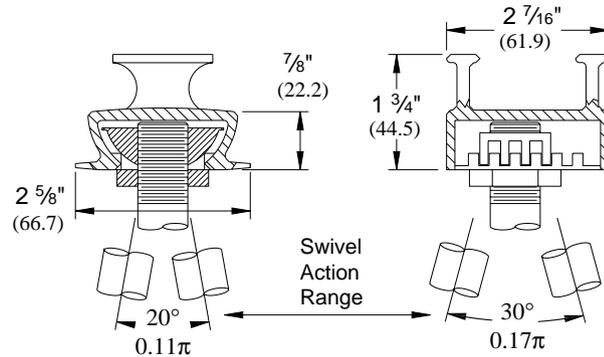
## M26



- For use with M2708 thru M2724 and M2808 thru M2824 nuts only.
  - See allowable loads below.
  - Safety factor of 5.
- (When used for sprinkler systems only.)

Material: Malleable iron.

## CONCRETE SPOT INSERT FOR SWIVEL OR RIGID CONNECTION

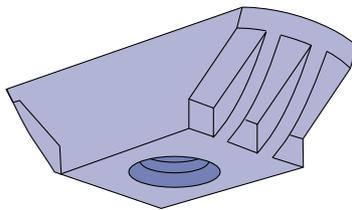


Patent No. 2953874

Part Number	Weight/C		Max. Allowable Point Load*	
	Lbs	kg	Lbs	kN
<b>M26</b>	63	28.6	1500	6.7

## M2708 thru M2724

SWIVEL NUT FOR M26, M29, M30, AND M31 INSERT



Finish: Cadmium.

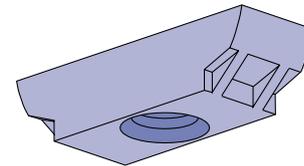
(When used for sprinkler systems only.)

Patent No. 2953874

Part Number	Size/Thread	Max. Allowable Load Swivel**		Weight/C	
		Lbs	kN	Lbs	kg
<b>M2708</b>	3/8-16	75	0.3	15	6.8
<b>M2710</b>	1/2-13	180	0.8	15	6.8
<b>M2712</b>	5/8-11	360	1.6	20	9.1
<b>M2723</b>	3/4-10	640	2.8	18	8.2
<b>M2724</b>	7/8-9	1000	4.4	15	6.8

## M2808 thru M2824

RIGID NUT FOR M26, M29, M30, AND M31 INSERT



Finish: Cadmium.

(When used for sprinkler systems only.)

Part Number	Size/Thread	Max. Allowable Load*		Weight/C	
		Lbs	kN	Lbs	kg
<b>M2808</b>	3/8-16	610	2.7	12	5.4
<b>M2810</b>	1/2-13	950	4.2	11	5.0
<b>M2812</b>	5/8-11	1500	6.7	14	6.4
<b>M2823</b>	3/4-10	1500	6.7	13	5.9
<b>M2824</b>	7/8-9	1500	6.7	11	5.0

### ALLOWABLE LOADS

\* The Fixed Position safe load ratings are for inserts and nut only and are based on the minimum of the following two conditions.

1. Load carrying capacities of threaded hanger rod as listed in the American Standard Code for Pressure Piping, 1967.
2. Laboratory tests of ultimate strength in any fixed rigid position with a safety factor of 5.

\*\* The Swivel Action safe load ratings assures the swivel movement of the nut before the hanger is subjected to a severe bending stress, in conformance with the American Standard Code for Pressure Piping, 1967.

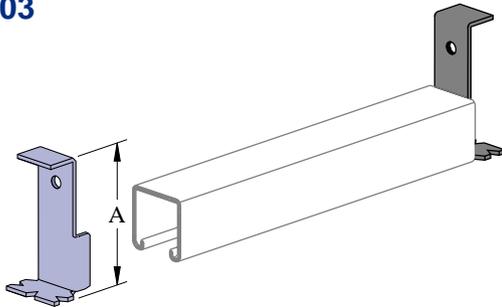
# END CAPS & ACCESSORIES

FOR 1<sup>5</sup>/<sub>8</sub>" (41 MM) WIDTH SERIES CHANNEL



**P1703**  
**P1704**  
**P3704**  
**P4703**

END CAP ANCHORS

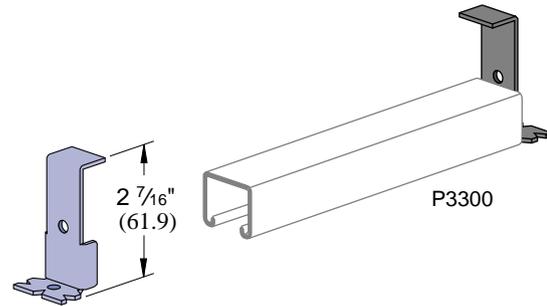


Material: 12 Gage.

Part Number	Channel	"A"		Weight/C	
		In	mm	Lbs	kg
<b>P1703</b>	P1000	2 <sup>13</sup> / <sub>32</sub>	61.1	30	13.6
<b>P1704</b>	P1000	3 <sup>17</sup> / <sub>32</sub>	89.7	37	16.8
<b>P3704</b>	P3000	3	76.2	20	9.1
<b>P4703</b>	P4000	2 <sup>3</sup> / <sub>8</sub>	60.3	27	12.2

**P3703**

END CAP ANCHORS

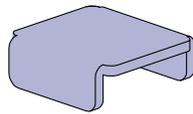


Material: 12 Gage.

Wt/C 17 Lbs (7.7 kg)

**P2407**  
**P3280**  
**P3380**

SINGLE PIECE END CAPS

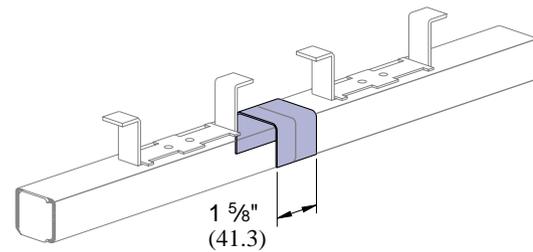


Material: 14 Gage.

Part Number	Channel	Weight/C	
		Lbs	kg
<b>P2407</b>	P1000	10	4.5
<b>P3280</b>	P3000	8	3.6
<b>P3380</b>	P3300	5	2.3

**P3663**  
**P4663**

JOINT COVERS



Material: 16 Gage.

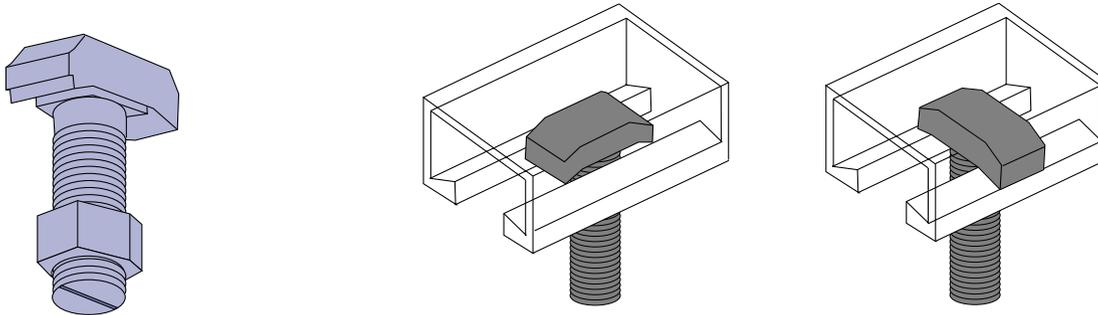
Part Number	Use With Insert Series	Weight/C	
		Lbs	kg
<b>P3663</b>	P3270	10	4.5
<b>P4663</b>	P3370 P4270	6	2.7

# HARDWARE FOR CONCRETE INSERTS

FOR P3740, P3760, P3770 & P3780 SERIES



## TEE-HEAD BOLTS



T-head bolts can be inserted anywhere along the channel and turned 90° to lock into position

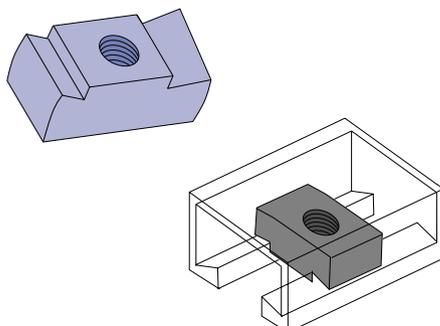
For Use With Insert Series	Part Number	Bolt Size (mm)	Bolt Length		Recommended Torque		Maximum Allowable Slip Load		Maximum Allowable Pull-Out*	
			mm	In	(N•m)	Ft-Lbs	kN	Lbs	kN	Lbs
P3740	40TH12125 EG	12	30	1¼	26	19	-	-	9.1	2045
	40TH12150 EG	12	40	1½	26	19	-	-	9.1	2045
	40TH12200 EG	12	50	2	26	19	-	-	9.1	2045
	40TH16125 EG	16	30	1¼	60	44	-	-	17.0	3815
	40TH16150 EG	16	40	1½	60	44	-	-	17.0	3815
	40TH16200 EG	16	50	2	60	44	-	-	17.0	3815
	41TH16150 EG†	16	40	1½	190	140	7.6	1700	41.2	9260
41TH16231 EG†	16	60	2½	190	140	7.6	1700	41.2	9260	
P3760 and P3770	60TH16125 EG	16	30	1¼	60	44	-	-	17.0	3815
	60TH16150 EG	16	40	1½	60	44	-	-	17.0	3815
	60TH16200 EG	16	50	2	60	44	-	-	17.0	3815
	60TH20225 EG	20	55	2¼	119	88	-	-	26.5	5950
	61TH16231 EG†	16	60	2½	190	140	7.6	1700	41.2	9260
	61TH20175 EG†	20	45	1¾	386	285	10.2	2300	64.3	14450
P3780	61TH20231 EG†	20	60	2½	386	285	10.2	2300	64.3	14450
	80TH24200 HG	24	50	2	199	147	-	-	38.0	8550
	81TH24300 HG†	24	75	3	637	470	12.2	2750	92.6	20820

\*These loads are based on T-Bolt capacity. For load capacity of installed concrete inserts, refer to appropriate insert load chart.

† High tensile bolts.

Note: Nuts are supplied with T-Bolts. These T-bolts and nuts are available in metric dimensions only.

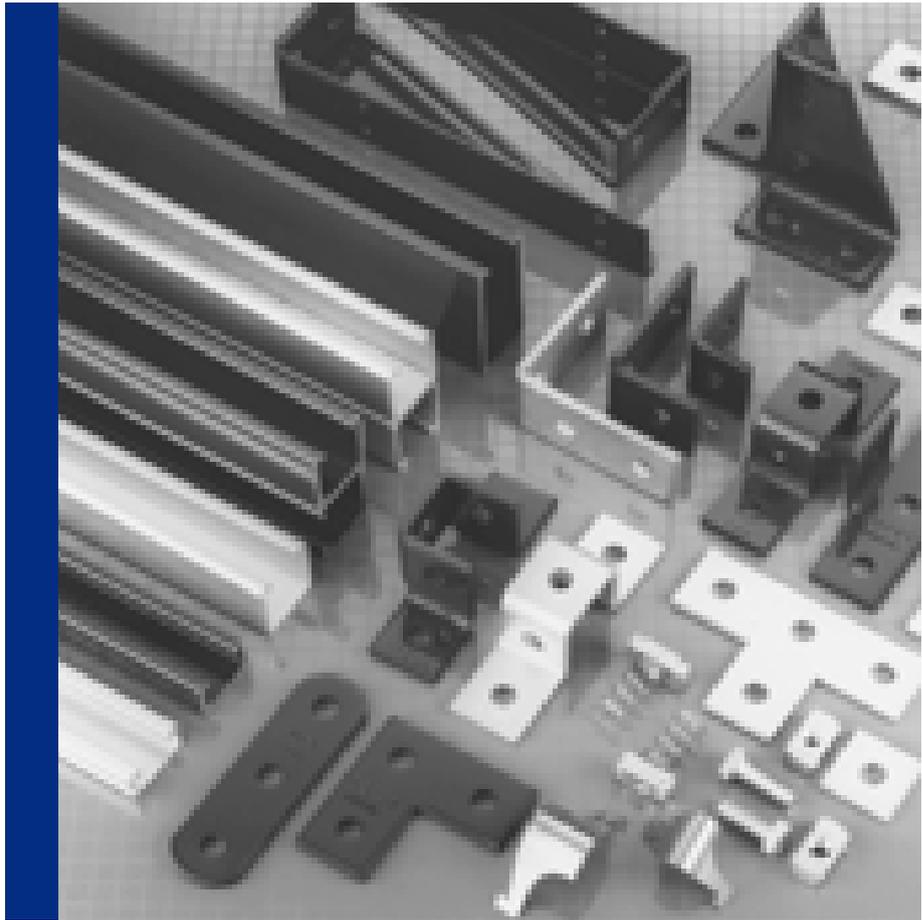
## INSERT NUT



For Use with Insert Series	Part Number	Thread Size/ (UNC)	Maximum Allowance Pull-out	
			Kn	Lbs
P3740	P3736	¾	5.4	1200
	P3737	½	8.0	1800
P3760 and P3770	P3766	¾	5.4	1200
	P3767	½	8.0	1800
P3780	P3786	½	8.0	1800
	P3787	⅝	15.1	3400

Finish: Electro-galvanized.

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1 1/4" Width Channels	181
Channel Nuts	187
End Caps & Closure Strips	189
General Fittings	190



## MATERIAL

Unistrut channels are accurately and carefully cold formed to size from low-carbon strip steel.

### STEEL: PLAIN

14 Gage (1.9 mm), ASTM A570 GR33  
19 Gage (1.0 mm) ASTM A366

### STEEL: PRE-GALVANIZED

14 Gage (1.9 mm), 19 Gage (1.0 mm)  
ASTM A653 GR 33

Channel nuts are manufactured from mild steel bars conforming to ASTM A576, GR 1015, and are case hardened.

Fittings are made from hot rolled, pickled and oiled steel plate or strip and conform to ASTM A570 GR 33.

Many framing channels are available in special metal on request. Consult factory for ordering information.

## FINISHES

All channels and fittings are available in: Perma-Green II (GR), Pre-galvanized (PG), conforming to ASTM A653 GR 33 and plain (PL). Nuts are available in plain or electro-galvanized (EG) finish. Fittings are available in Perma-Green II or plain.

## STANDARD LENGTHS

Standard lengths are 10 feet (3.05M) and 20 feet (6.10M). Tolerances are +1/8" (3.2 mm) to +1/2" (12.7 mm) to allow for cutting. Special lengths are available for a small cutting charge with a tolerance of ±1/8" (3.2mm).

## APPLICATION

A framing system designed for medium loads, the 1 1/4" series is especially suitable for use in the OEM, commercial and display markets. It maintains a lightness in scale and a clean line that makes it aesthetically pleasing as well as functional.

## THREADS

All threads on the nuts and bolts are Unified and American coarse screw threads.

## DESIGN BOLT TORQUE

<b>BOLT SIZE</b>	1/4"	5/16"	3/8"
	20	18	16
<b>FOOT LBS.</b>	6	11	19
<b>N·m</b>	8	15	25

## DIMENSIONS

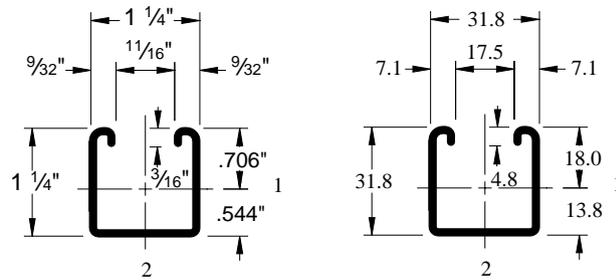
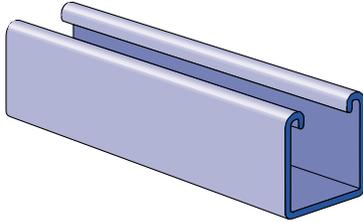
Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

# A1000 & A1001 CHANNELS

FOR 1 1/4" (32 MM) WIDTH SERIES CHANNEL

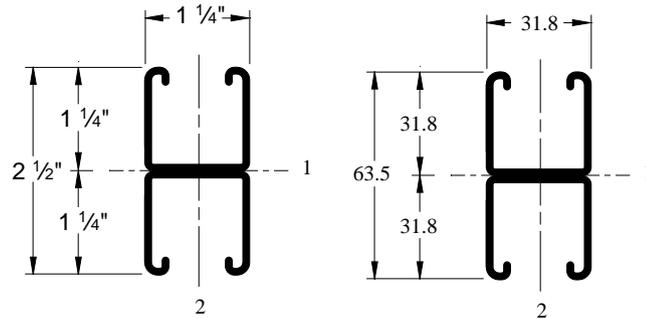
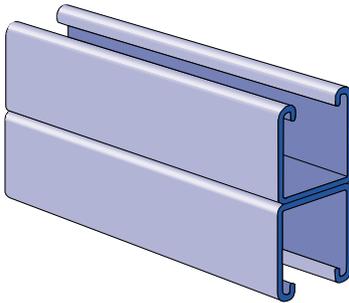


## A1000



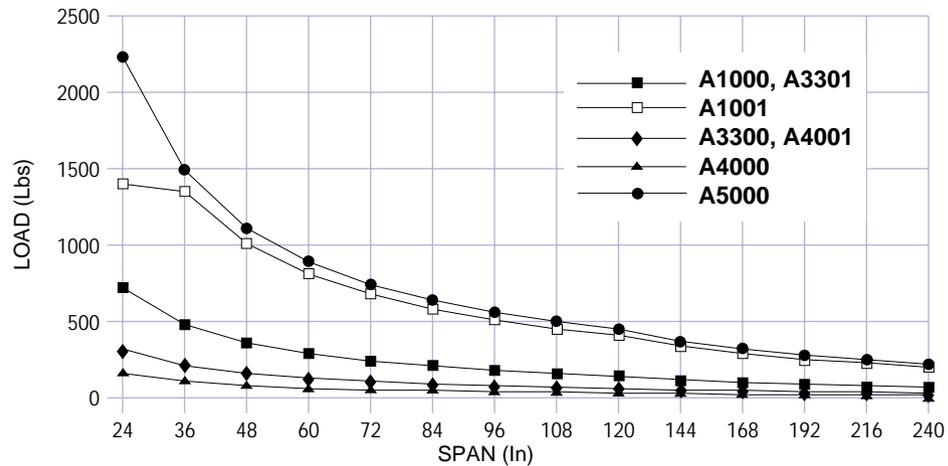
Weight: 104 Lbs/CFt (155 kg/100m)

## A1001



Weight: 208 Lbs/CFt (310 kg/100m)

## BEAM LOAD\*



\*Maximum allowable uniform load.

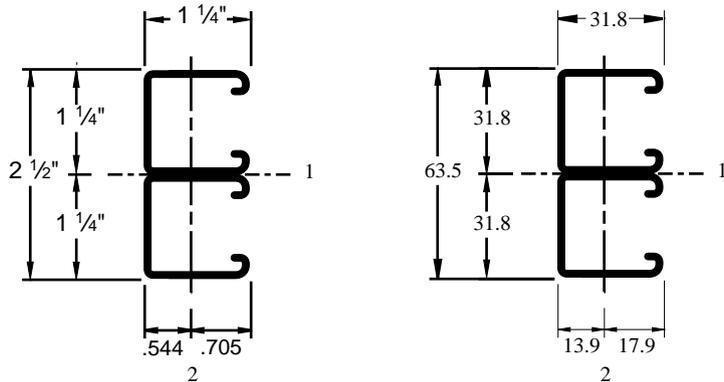
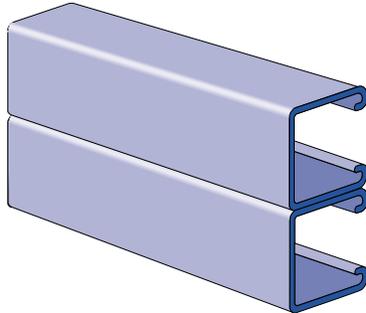
Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N*m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
<b>A1000</b>	1.04	1.5	2,160	240	.075	1.9	■	■	■	■	■	■		■
<b>A1001</b>	2.08	3.1	6,090	690	.075	1.9	■	■	■	■	■	■		

# A1000 CHANNEL COMBINATIONS

FOR 1 1/4" (32 MM) WIDTH SERIES CHANNEL

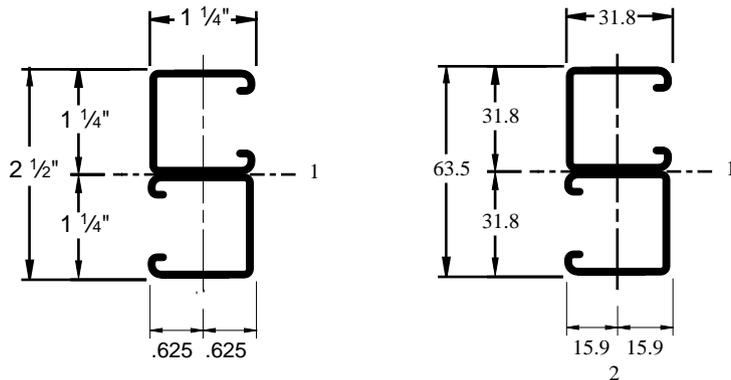
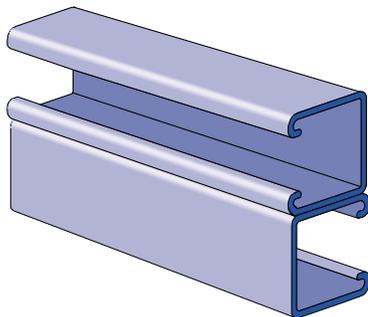


## A1001 A



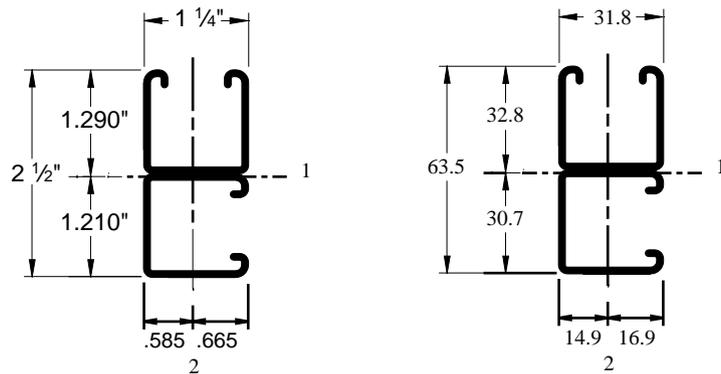
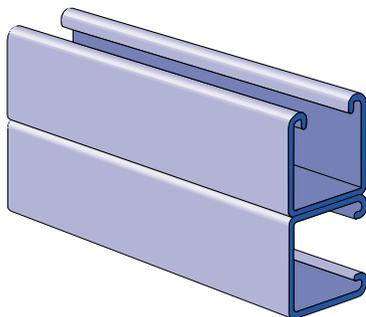
Weight: 208 Lbs/CFt (310 kg/100m)

## A1001 B



Weight: 208 Lbs/CFt (310 kg/100m)

## A1001 C



Weight: 208 Lbs/CFt (310 kg/100m)

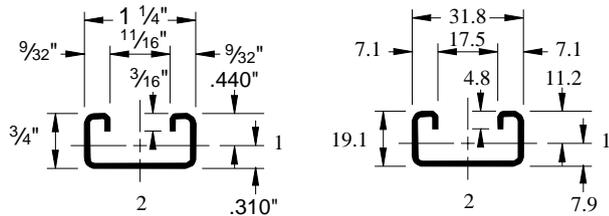
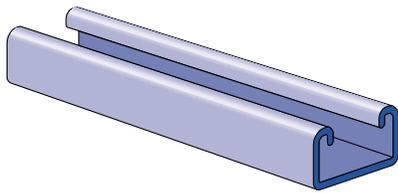
Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N*m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
A1001 A	2.08	3.1	7,920	895	.075	1.9	■	■	■	■	■	■		
A1001 B	2.08	3.1	7,920	895	.075	1.9	■	■	■	■	■	■		
A1001 C	2.08	3.1	6,770	765	.075	1.9	■	■	■	■	■	■		

# A3300, A3301, A4000, A4001 & A5000 CHANNELS

FOR 1 1/4" (32 MM) WIDTH SERIES CHANNEL

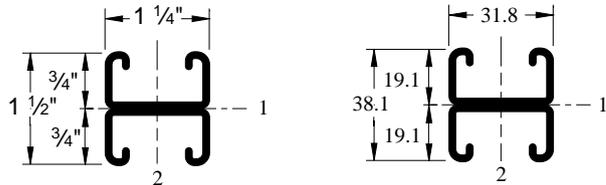
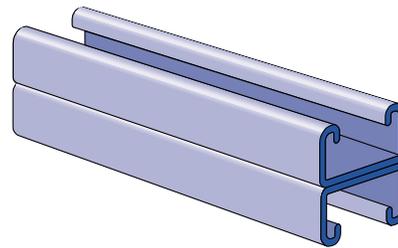


## A3300



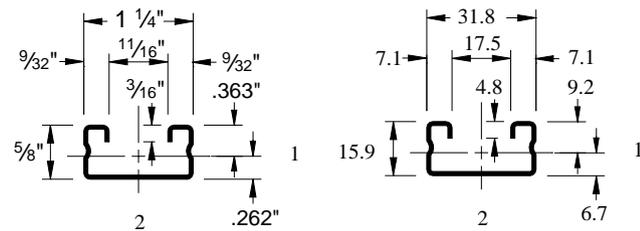
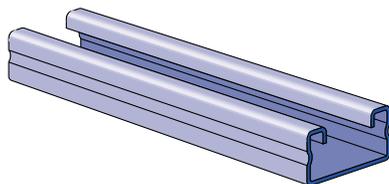
Weight: 78 Lbs/CFt (116 kg/100m)

## A3301



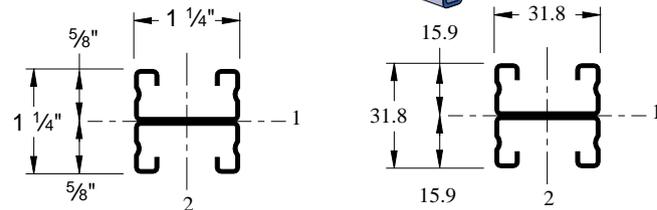
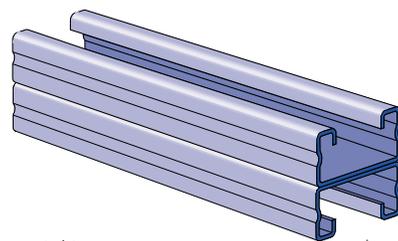
Weight: 156 Lbs/CFt (232 kg/100m)

## A4000



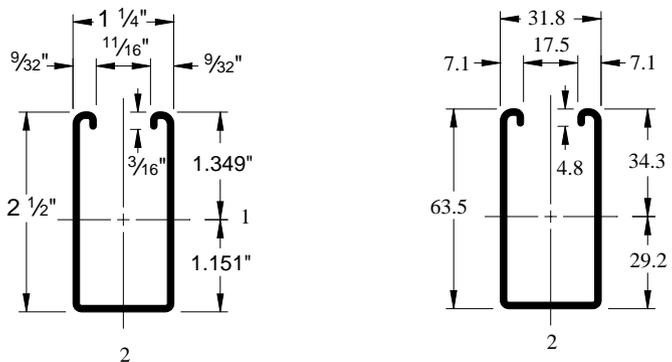
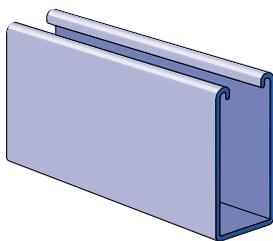
Weight: 45 Lbs/CFt (67 kg/100m)

## A4001



Weight: 90 Lbs/CFt (134 kg/100m)

## A5000



Weight: 167 Lbs/CFt (249 kg/100m)

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths	Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N*m	In	mm		PL	GR	HG	PG	SS	EA
A3300	.78	1.2	960	110	.075	1.9	16'	■	■	■	■		
A3301	1.56	2.3	2,590	290	.075	1.9	16'	■	■	■	■		
A4000	.45	0.7	480	50	.040	1.0	16'	■	■	■	■		■
A4001	.90	1.3	1,230	140	.040	1.0	16'	■	■	■	■		■
A5000	1.67	2.5	6,690	760	.075	1.9	10'	20'	■	■	■	■	

# A1000, A3300, A4000, & A5000 SERIES CHANNELS

FOR 1¼" (32 MM) WIDTH SERIES CHANNEL



## BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections							
							Span/180		Span/240		Span/360			
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN		
24	610	A1000	720	3.2	0.07	2	720	3.2	720	3.2	670	3.0		
		A1001	1400*	6.2	0.03	1	1400*	6.2	1400*	6.2	1400*	6.2		
		A3300	320	1.4	0.11	3	320	1.4	280	1.2	190	0.8		
		A3301	840*	3.7	0.07	2	840*	3.7	840*	3.7	840*	3.7		
		A4000	160	0.7	0.14	4	150	0.7	110	0.5	80	0.4		
		A4001	330*	1.5	0.06	2	330*	1.5	330*	1.5	330*	1.5		
		A5000	2230	9.9	0.04	1	2230	9.9	2230	9.9	2230	9.9		
36	914	A1000	480	2.1	0.16	4	480	2.1	440	2.0	300	1.3		
		A1001	1350	6.0	0.09	2	1350	6.0	1350	6.0	1350	6.0		
		A3300	210	0.9	0.25	6	170	0.8	120	0.5	80	0.4		
		A3301	580	2.6	0.15	4	580	2.6	570	2.5	380	1.7		
		A4000	110	0.5	0.32	8	70	0.3	50	0.2	30	0.1		
		A4001	270	1.2	0.18	5	270	1.2	230	1.0	150	0.7		
		A5000	1490	6.6	0.09	2	1490	6.6	1490	6.6	1490	6.6		
48	1219	A1000	360	1.6	0.29	7	330	1.5	250	1.1	170	0.8		
		A1001	1010	4.5	0.16	4	1010	4.5	1010	4.5	830	3.7		
		A3300	160	0.7	0.46	12	90	0.4	70	0.3	50	0.2		
		A3301	430	1.9	0.27	7	430	1.9	320	1.4	210	0.9		
		A4000	80	0.4	0.56	14	40	0.2	30	0.1	20	0.1		
		A4001	210	0.9	0.33	8	170	0.8	130	0.6	80	0.4		
		A5000	1110	4.9	0.15	4	1110	4.9	1110	4.9	980	4.4		
60	1524	A1000	290	1.3	0.45	12	210	0.9	160	0.7	110	0.5		
		A1001	810	3.6	0.25	6	810	3.6	790	3.5	530	2.4		
		A3300	130	0.6	0.73	19	60	0.3	40	0.2	30	0.1		
		A3301	350	1.6	0.43	11	270	1.2	200	0.9	140	0.6		
		A4001	160	0.7	0.49	12	110	0.5	80	0.4	50	0.2		
		A5000	890	4.0	0.24	6	890	4.0	890	4.0	630	2.8		
		72	1829	A1000	240	1.1	0.65	16	150	0.7	110	0.5	70	0.3
A1001	680			3.0	0.37	9	680	3.0	550	2.4	370	1.6		
A3301	290			1.3	0.61	16	190	0.8	140	0.6	90	0.4		
A4001	140			0.6	0.74	19	80	0.4	60	0.3	40	0.2		
A5000	740			3.3	0.34	9	740	3.3	650	2.9	440	2.0		
84	2134			A1000	210	0.9	0.90	23	110	0.5	80	0.4	50	0.2
				A1001	580	2.6	0.50	13	540	2.4	410	1.8	270	1.2
		A3301	250	1.1	0.84	21	140	0.6	100	0.4	70	0.3		
		A4001	120	0.5	1.01	26	60	0.3	40	0.2	30	0.1		
		A5000	640	2.8	0.47	12	640	2.8	480	2.1	320	1.4		
		96	2438	A1000	180	0.8	1.15	29	80	0.4	60	0.3	40	0.2
				A1001	510	2.3	0.66	17	410	1.8	310	1.4	210	0.9
A3301	220			1.0	1.10	28	110	0.5	80	0.4	50	0.2		
A5000	560			2.5	0.61	15	490	2.2	370	1.6	250	1.1		
108	2743			A1000	160	0.7	1.46	37	70	0.3	50	0.2	30	0.1
				A1001	450	2.0	0.83	21	330	1.5	250	1.1	160	0.7
				A5000	500	2.2	0.77	20	390	1.7	290	1.3	190	0.8
		120	3048	A1001	410	1.8	1.03	26	260	1.2	200	0.9	130	0.6
				A5000	450	2.0	0.96	24	310	1.4	240	1.1	160	0.7

\*Load limited by spot weld shear.

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.

# A1000, A3300, A4000, & A5000 SERIES CHANNELS

FOR 1¼" (32 MM) WIDTH SERIES CHANNEL



## COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.									
					K = .65		K = .80		K = 1.0		K = 1.2			
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN		
24	610	A1000	1790	8.0	4890	21.8	4800	21.4	4630	20.6	4430	19.7		
		A1001	3450	15.3	12890	57.3	12650	56.3	12260	54.5	11780	52.4		
		A3300	1020	4.5	2330	10.4	2270	10.1	2190	9.7	2080	9.3		
		A3301	2380	10.6	9540	42.4	9270	41.2	8830	39.3	8280	36.8		
		A4000	610	2.7	1490	6.6	1450	6.4	1400	6.2	1280	5.7		
		A4001	1290	5.7	4980	22.2	4790	21.3	4470	19.9	4080	18.1		
		A5000	2650	11.8	5970	26.6	5830	25.9	5580	24.8	5280	23.5		
36	914	A1000	1550	6.9	3980	17.7	3760	16.7	3380	15.0	2950	13.1		
		A1001	3300	14.7	12310	54.8	11780	52.4	10910	48.5	9840	43.8		
		A3300	640	2.8	1030	4.6	1010	4.5	970	4.3	930	4.1		
		A3301	2160	9.6	8890	39.5	8280	36.8	7280	32.4	6050	26.9		
		A4000	380	1.7	670	3.0	650	2.9	620	2.8	570	2.5		
		A4001	1140	5.1	4510	20.1	4080	18.1	3360	14.9	2490	11.1		
		A5000	1850	8.2	3100	13.8	3000	13.3	2840	12.6	2660	11.8		
48	1219	A1000	1320	5.9	3250	14.5	2910	12.9	2460	10.9	2050	9.1		
		A1001	3100	13.8	11510	51.2	10570	47.0	9010	40.1	7110	31.6		
		A3300	420	1.9	580	2.6	570	2.5	550	2.4	**	**		
		A3301	1910	8.5	7970	35.5	6890	30.6	5110	22.7	3550	15.8		
		A4000	260	1.2	380	1.7	370	1.6	**	**	**	**		
		A4001	950	4.2	3860	17.2	3090	13.7	2020	9.0	1400	6.2		
		A5000	1400	6.2	2070	9.2	1980	8.8	1860	8.3	1720	7.7		
60	1524	A1000	1130	5.0	2710	12.1	2340	10.4	1890	8.4	1520	6.8		
		A1001	2850	12.7	10490	46.7	9010	40.1	6580	29.3	4570	20.3		
		A3300	290	1.3	370	1.6	360	1.6	**	**	**	**		
		A3301	1620	7.2	6790	30.2	5110	22.7	3270	14.5	2270	10.1		
		A4001	770	3.4	3010	13.4	2020	9.0	1290	5.7	**	**		
		A5000	1140	5.1	1580	7.0	1500	6.7	1390	6.2	1270	5.6		
		72	1829	A1000	980	4.4	2320	10.3	1930	8.6	1500	6.7	1170	5.2
A1001	2550			11.3	9230	41.1	7110	31.6	4570	20.3	3170	14.1		
A3301	1340			6.0	5360	23.8	3550	15.8	2270	10.1	**	**		
A4001	620			2.8	2130	9.5	1400	6.2	**	**	**	**		
A5000	970			4.3	1310	5.8	1230	5.5	1120	5.0	1010	4.5		
84	2134			A1000	850	3.8	2000	8.9	1610	7.2	1210	5.4	**	**
				A1001	2210	9.8	7740	34.4	5240	23.3	3360	14.9	2330	10.4
		A3301	1120	5.0	3950	17.6	2610	11.6	**	**	**	**		
		A4001	510	2.3	1560	6.9	1030	4.6	**	**	**	**		
		A5000	860	3.8	1130	5.0	1060	4.7	950	4.2	840	3.7		
		96	2438	A1000	740	3.3	1730	7.7	1350	6.0	**	**	**	**
				A1001	1920	8.5	6080	27.0	4020	17.9	2570	11.4	**	**
A3301	950			4.2	3030	13.5	2000	8.9	**	**	**	**		
A5000	770			3.4	1010	4.5	930	4.1	830	3.7	**	**		
108	2743			A1000	650	2.9	1500	6.7	1150	5.1	**	**	**	**
				A1001	1670	7.4	4810	21.4	3170	14.1	**	**	**	**
				A5000	710	3.2	920	4.1	840	3.7	**	**	**	**
		120	3048	A1001	1470	6.5	3890	17.3	2570	11.4	**	**	**	**
				A5000	660	2.9	850	3.8	770	3.4	**	**	**	**

\*\* $\frac{KL}{r} > 200$

# ELEMENTS OF SECTION & BEARING LOADS

FOR 1¼" (32 MM) WIDTH SERIES CHANNEL



## ELEMENTS OF SECTION

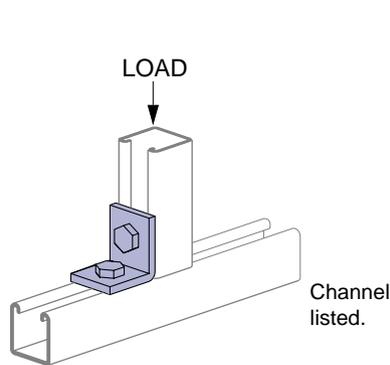
Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In <sup>2</sup>	cm <sup>2</sup>	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm
<b>A1000</b>	.305	1.97	.061	2.5	.086	1.41	.447	1.1	.078	3.2	.125	2.05	.506	1.3
<b>A1001</b>	.610	3.94	.303	12.6	.242	3.97	.705	1.8	.156	6.5	.250	4.10	.506	1.3
<b>A3300</b>	.230	1.48	.017	.7	.038	.62	.269	0.7	.052	2.2	.084	1.38	.477	1.2
<b>A3301</b>	.460	2.97	.078	3.2	.103	1.69	.411	1.0	.104	4.3	.167	2.74	.477	1.2
<b>A4000</b>	.123	.79	.007	.3	.019	.31	.239	0.6	.028	1.2	.045	.74	.477	1.2
<b>A4001</b>	.245	1.58	.031	1.3	.049	.80	.354	0.9	.056	2.3	.089	1.46	.477	1.2
<b>A5000</b>	.492	3.17	.359	14.9	.266	4.36	.854	2.2	.143	6.0	.229	3.75	.539	1.4

I - Moment of Inertia

S - Section Modulus

r - Radius of Gyration

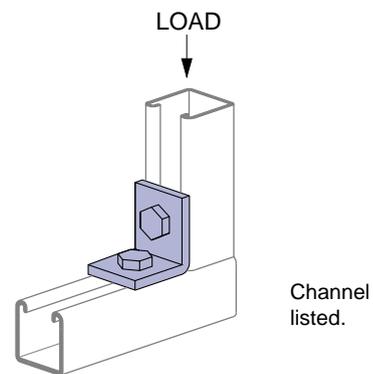
## LOAD DATA FOR UNISTRUT SECTIONS SUBJECT TO CRUSHING LOADS



Load at Center of Member.

Channel	Allowable Load	
	Lbs	kN
<b>A1000</b>	3000	13.3
<b>A3300</b>	3000	13.3
<b>A4000</b>	1400	6.2
<b>A5000</b>	2500	11.1

Safety Factor of 2½



Load at End of Member.

Channel	Allowable Load	
	Lbs	kN
<b>A1000</b>	2000	8.9
<b>A3300</b>	2000	8.9
<b>A4000</b>	1000	4.4
<b>A5000</b>	1800	8.0

Safety Factor of 2½

# NUT SELECTION CHART & LOAD DATA

FOR 1/4" (32 MM) WIDTH SERIES CHANNEL



## MAXIMUM ALLOWABLE PULL-OUT AND SLIP LOADS

Nut Size/ Thread	Channel	Gage	Max.Allowable Pull-out		Resistance to Slip		Torque	
			Lbs	kN	Lbs	kN	Ft Lbs	N•m
3/8" - 16	A1000	14	900	4.0	500	2.2	19	25
5/16" - 18	A3300		900	4.0	500	2.2	11	15
1/4" - 20	A5000		900	4.0	500	2.2	6	8
3/8" - 16	A4000	19	300	1.3	400	1.8	19	25

Nut design loads include a minimum safety factor of 3.

## NUT SELECTION CHART

Channel Nuts Part Number	Nut Size/ Thread	Use With Channel			
		A1000	A3300	A4000	A5000
<b>A1006-1420</b>	1/4" - 20	■			
<b>A1007</b>	5/16" - 18	■			
<b>A1008</b>	3/8" - 16	■			
<b>A3006-1420</b>	1/4" - 20	■	■	■	■
<b>A3007</b>	5/16" - 18	■	■	■	■
<b>A3008</b>	3/8" - 16	■	■	■	■
<b>A3016-0832</b>	#8 - 32	■	■	■	■
<b>A3016-1024</b>	#10 - 24	■	■	■	■
<b>A3016-1032</b>	#10 - 32	■	■	■	■
<b>A3016-1420</b>	1/4" - 20	■	■	■	■
<b>A4006-1420</b>	1/4" - 20		■	■	
<b>A4007</b>	5/16" - 18		■	■	
<b>A4008</b>	3/8" - 16		■	■	
<b>A5006-1420</b>	1/4" - 20				■
<b>A5007</b>	5/16" - 18				■
<b>A5008</b>	3/8" - 16				■

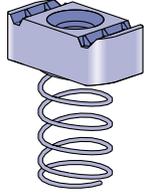
# UNISTRUT NUTS

FOR 1¼" (32 MM) WIDTH SERIES CHANNEL



**A1006-1420**  
**A1007**  
**A1008**

**CHANNEL NUTS WITH SPRINGS**



Note: Use with A1000 channel.

Part Number	Thread Size	Weight per 100	
		Lbs	kg
<b>A1006-1420</b>	¼"-20	6	2.7
<b>A1007</b>	⅝"-18	6	2.7
<b>A1008</b>	⅜"-16	6	2.7

**A4006-1420**  
**A4007**  
**A4008**

**CHANNEL NUTS WITH SPRINGS**

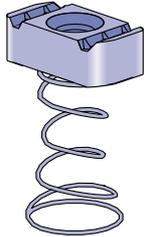


Note: Use with A3300 & A4000 channels.

Part Number	Thread Size	Weight per 100	
		Lbs	kg
<b>A4006-1420</b>	¼"-20	5	2.3
<b>A4007</b>	⅝"-18	5	2.3
<b>A4008</b>	⅜"-16	5	2.3

**A5006-1420**  
**A5007**  
**A5008**

**CHANNEL NUTS WITH SPRINGS**



Note: Use with A5000 channel.

Part Number	Thread Size	Weight per 100	
		Lbs	kg
<b>A5006-1420</b>	¼"-20	6	2.7
<b>A5007</b>	⅝"-18	6	2.7
<b>A5008</b>	⅜"-16	6	2.7

**A3006-1420**  
**A3007**  
**A3008**

**CHANNEL NUTS WITHOUT SPRINGS**

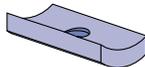


Note: Use with A1000, A3300, A4000 & A5000 channels.

Part Number	Thread Size	Weight per 100	
		Lbs	kg
<b>A3006-1420</b>	¼"-20	5	2.3
<b>A3007</b>	⅝"-18	5	2.3
<b>A3008</b>	⅜"-16	5	2.3

**A3016-0832**  
thru  
**A3016-1420**

**CHANNEL NUTS WITHOUT SPRINGS**



Note: Use with A1000, A3300, A4000 & A5000 channels.

Part Number	Thread Size	Weight per 100	
		Lbs	kg
<b>A3016-0832</b>	#8 - 32	1	0.5
<b>A3016-1024</b>	#10 - 24	1	0.5
<b>A3016-1032</b>	#10 - 32	1	0.5
<b>A3016-1420</b>	¼" - 20	1	0.5

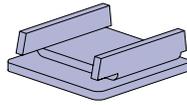
# CHANNEL END CAPS & CLOSURE STRIP

FOR 1 1/4" (32 MM) WIDTH SERIES CHANNEL



**A1280**

END CAP



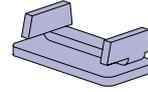
Material: .075" (1.9)

Note: Use with A1000 channel.

Wt/C 7 Lbs (3.2 kg)

**A4280**

END CAP



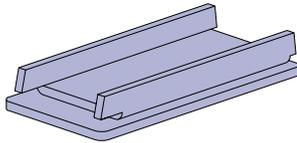
Material: .075" (1.9)

Note: Use with A4000 channel.

Wt/C 3 Lbs (1.4 kg)

**A5280**

END CAP



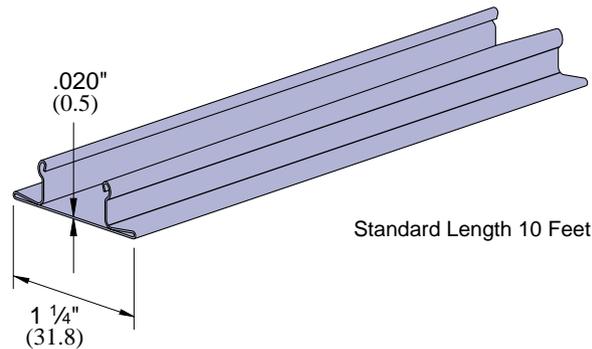
Material: .075" (1.9)

Note: Use with A5000 channel.

Wt/C 14 Lbs (6.4 kg)

**A1184**

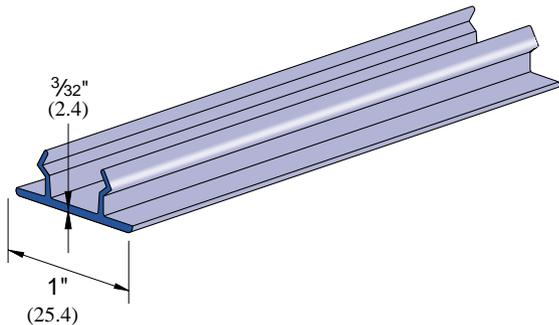
CLOSURE STRIP



Wt/C Ft 21 Lbs (31.3 kg/100M)

**A1184P**

CLOSURE STRIP



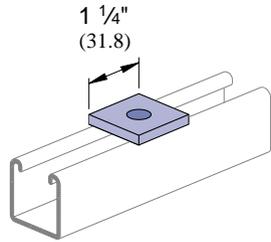
Wt/C Ft 21 Lbs (31.3 kg/100M)

# FLAT PLATE FITTINGS

FOR 1 1/4" (32 MM) WIDTH SERIES CHANNEL

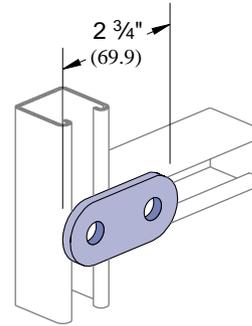


**A1063**



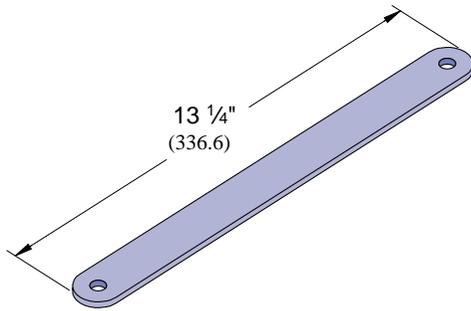
Wt/C 8 Lbs (3.6 kg)

**A1065**



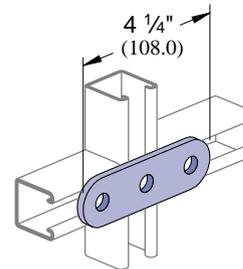
Wt/C 17 Lbs (7.7 kg)

**A1191**



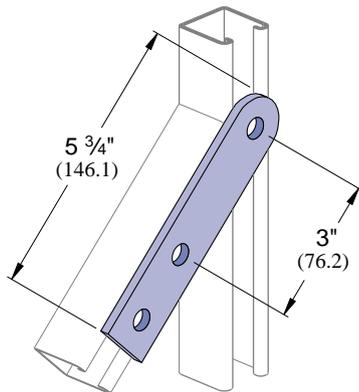
Wt/C 87 Lbs (39.5 kg)

**A1066**



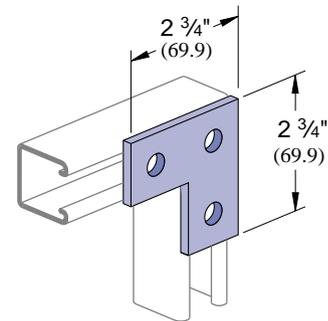
Wt/C 26 Lbs (11.8 kg)

**A2324**



Wt/C 39 Lbs (17.7 kg)

**A1036**



Wt/C 27 Lbs (12.2 kg)

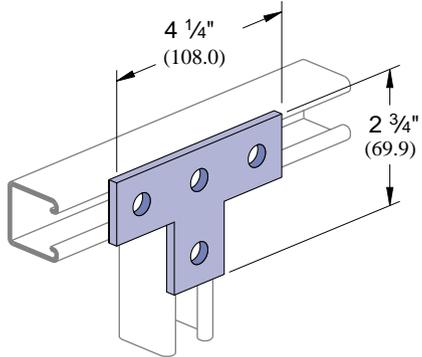
Hole Size	Hole Spacing	Width	Thickness
1 3/32" Diameter	5/8" (15.9 mm) From End	1 1/4"	3/16"
10.3 mm	1 1/2" (38.1 mm) On Center	31.8 mm	4.8 mm

# FLAT PLATE & NINETY DEGREE FITTINGS

FOR 1 1/4" (32 MM) WIDTH SERIES CHANNEL

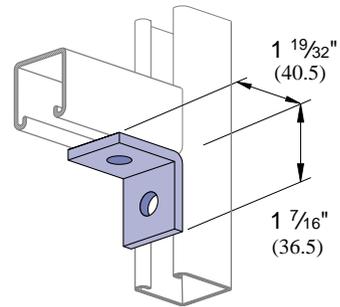


**A1031**



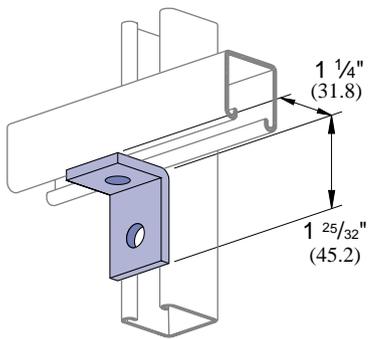
Wt/C 34 Lbs (15.4 kg)

**A1026**



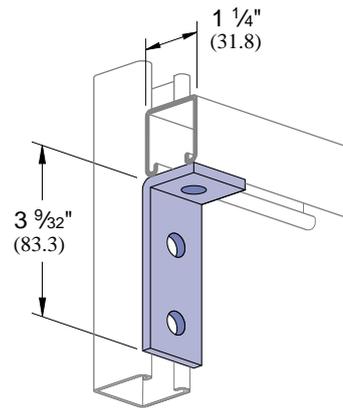
Wt/C 17 Lbs (7.7 kg)

**A1068**



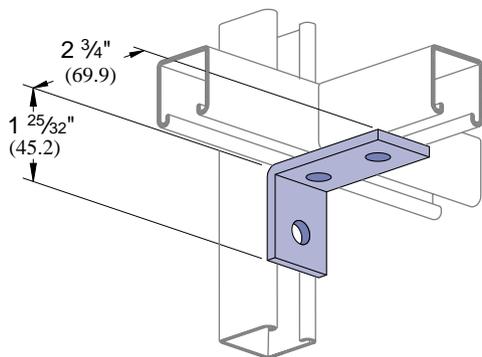
Wt/C 17 Lbs (7.7 kg)

**A1326**



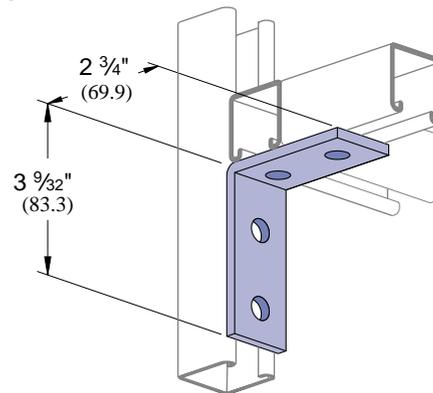
Wt/C 27 Lbs (12.2 kg)

**A1458**



Wt/C 27 Lbs (12.2 kg)

**A1325**



Wt/C 38 Lbs (17.2 kg)

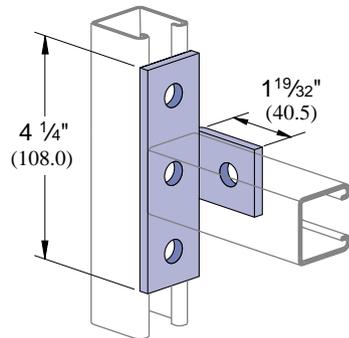
Hole Size	Hole Spacing	Width	Thickness
1 3/32" Diameter	5/8" (15.9 mm) From End	1 1/4"	3/16"
10.3 mm	1 1/2" (38.1 mm) On Center	31.8 mm	4.8 mm

# NINETY DEGREE FITTINGS

FOR 1 1/4" (32 MM) WIDTH SERIES CHANNEL

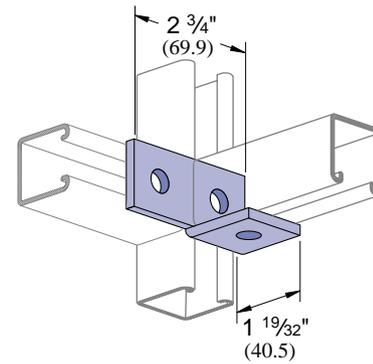


**A1033**



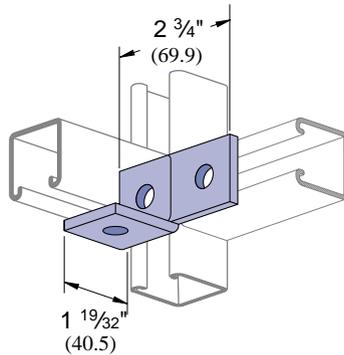
Wt/C 34 Lbs (15.4 kg)

**A1037**



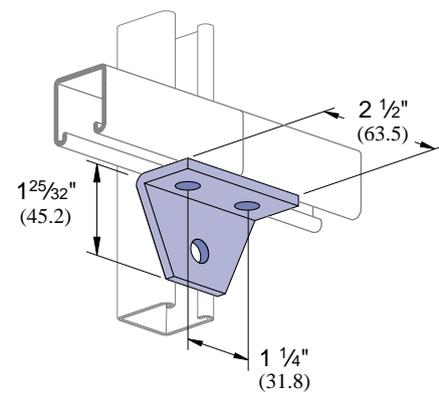
Wt/C 30 Lbs (13.6 kg)

**A1038**



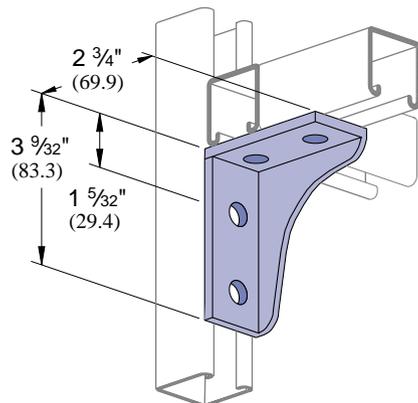
Wt/C 30 Lbs (13.6 kg)

**A1357**



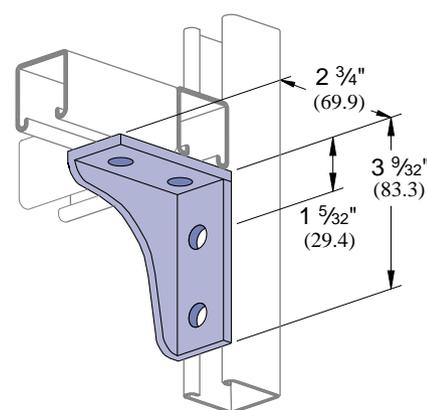
Wt/C 30 Lbs (13.6 kg)

**A1331**



Wt/C 75 Lbs (34.0 kg)

**A1332**



Wt/C 75 Lbs (34.0 kg)

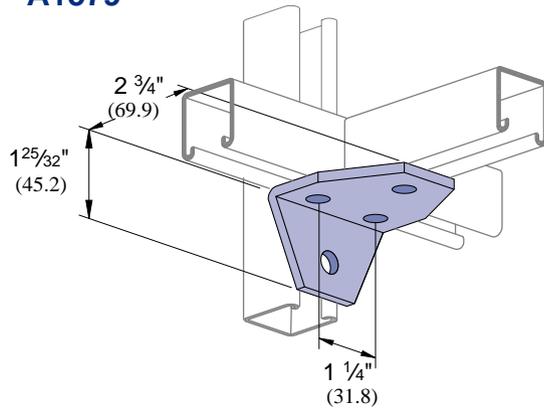
Hole Size	Hole Spacing	Width	Thickness
13/32" Diameter 10.3 mm	5/8" (15.9 mm) From End 1 1/2" (38.1 mm) On Center	1 1/4" 31.8 mm	3/16" 4.8 mm

# NINETY DEGREE & "Z" SHAPE FITTINGS

FOR 1 1/4" (32 MM) WIDTH SERIES CHANNEL

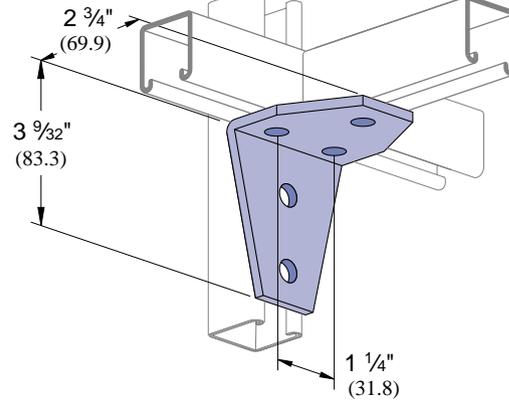


**A1579**



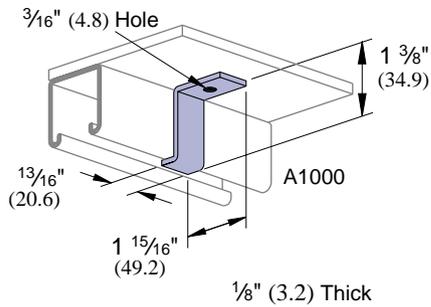
Wt/C 44 Lbs (20.0 kg)

**A2235**



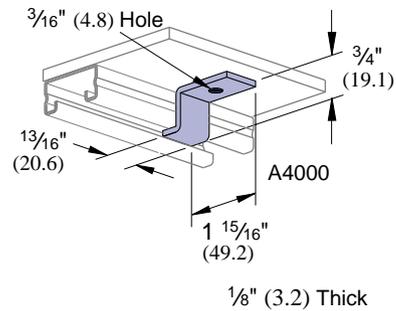
Wt/C 59 Lbs (26.8 kg)

**A2120**



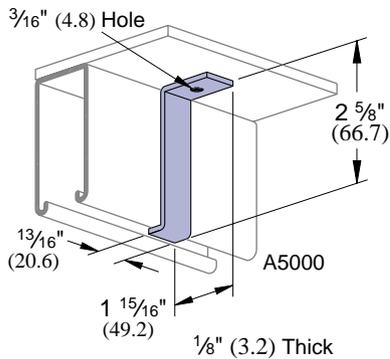
Wt/C 9 Lbs (4.1 kg)

**A4120**



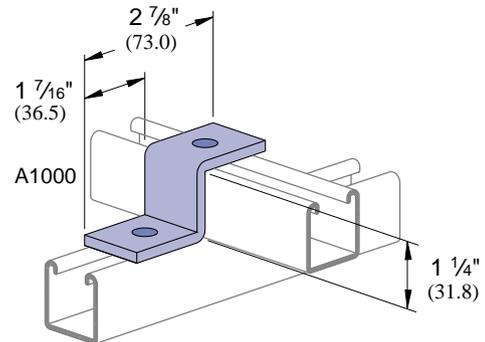
Wt/C 7 Lbs (3.2 kg)

**A5120**



Wt/C 13 Lbs (5.9 kg)

**A1045**



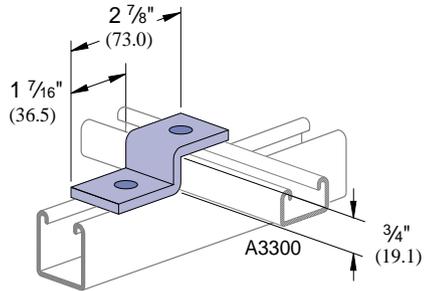
Wt/C 25 Lbs (11.3 kg)

Hole Size	Hole Spacing	Width	Thickness
13/32" Diameter 10.3 mm	5/8" (15.9 mm) From End 1 1/2" (38.1 mm) On Center	1 1/4" 31.8 mm	3/16" 4.8 mm

# "Z", ANGULAR & WING SHAPE FITTINGS FOR 1 1/4" (32 MM) WIDTH SERIES CHANNEL

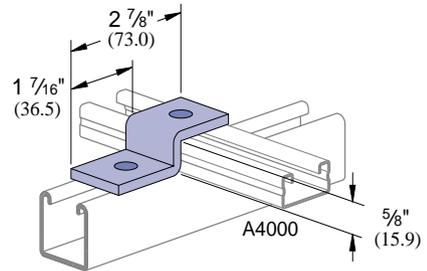


## A3345



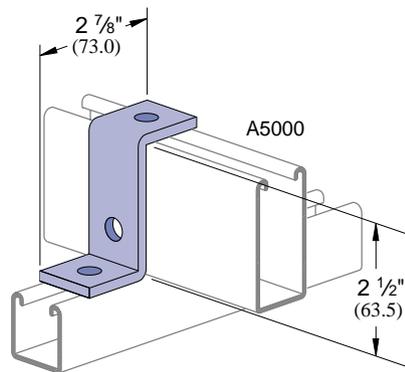
Wt/C 23 Lbs (10.4 kg)

## A4045



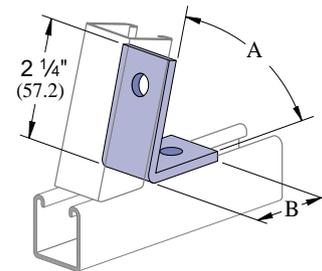
Wt/C 21 Lbs (9.5 kg)

## A5045



Wt/C 33 Lbs (15.0 kg)

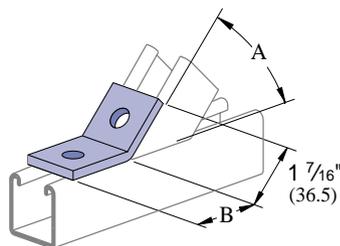
## A2109 A2110 A2111



Part Number	"A"		"B"	
	Degree	rad	In	mm
A2109	52 1/2	.29π	1 25/32	45.2
A2110	45	.25π	1 3/4	44.5
A2111	37 1/2	.21π	1 3/4	44.5

Wt/C 23 Lbs (10.4 kg)

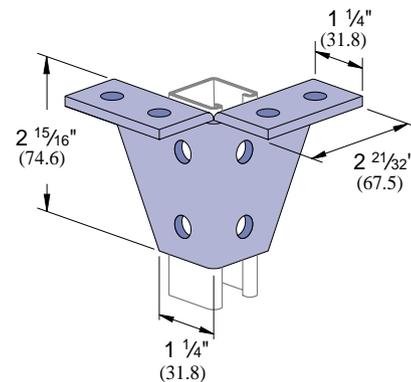
## A2125 A2126 A2127



Part Number	"A"		"B"	
	Degree	rad	In	mm
A2125	52 1/2	.29π	1 1/4	31.8
A2126	45	.25π	1 1/4	31.8
A2127	37 1/2	.21π	1 3/32	32.5

Wt/C 17 Lbs (7.7 kg)

## A2084



Wt/C 90 Lbs (40.8 kg)

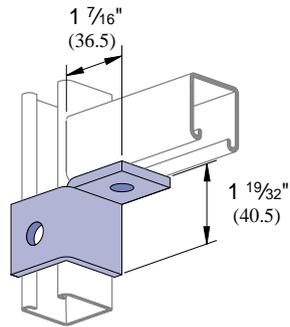
Hole Size	Hole Spacing	Width	Thickness
1 3/32" Diameter 10.3 mm	5/8" (15.9 mm) From End 1 1/2" (38.1 mm) On Center	1 1/4" 31.8 mm	3/16" 4.8mm

# WING & "U" SHAPE FITTINGS

FOR 1 1/4" (32 MM) WIDTH SERIES CHANNEL



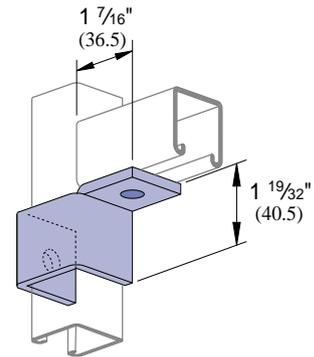
## A2341 R-L



R-As shown  
L-Opposite hand

Wt/C 26 Lbs (11.8 kg)

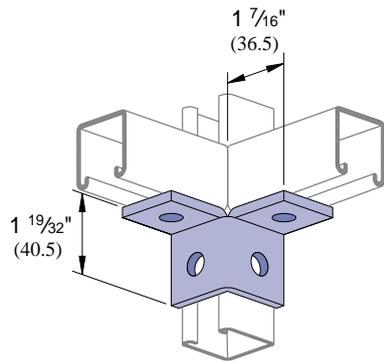
## A2472 R-L



R-As shown  
L-Opposite hand

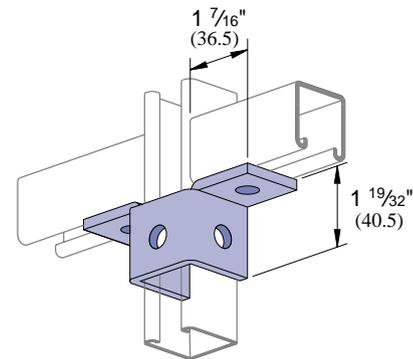
Wt/C 33 Lbs (15.0 kg)

## A2223



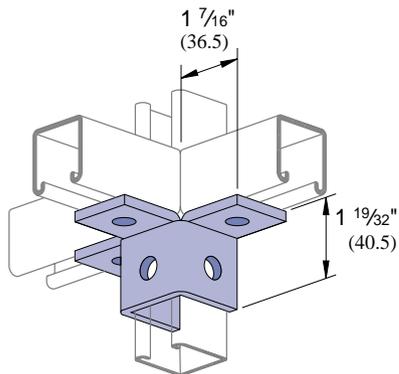
Wt/C 34 Lbs (15.4 kg)

## A2345



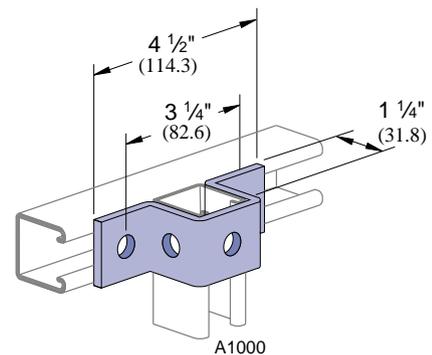
Wt/C 41 Lbs (18.6 kg)

## A2227



Wt/C 52 Lbs (23.6 kg)

## A1047



Wt/C 43 Lbs (19.5 kg)

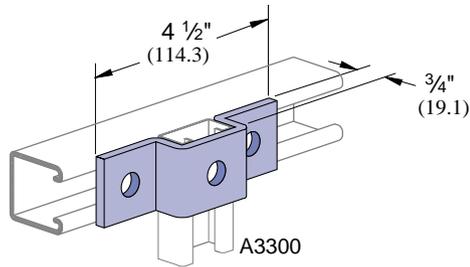
Hole Size	Hole Spacing	Width	Thickness
1 3/32" Diameter	5/8" (15.9 mm) From End	1 1/4"	3/16"
10.3 mm	1 1/2" (38.1 mm) On Center	31.8 mm	4.8 mm

# "U" SHAPE FITTINGS & TUBING CLIPS

FOR 1 1/4" (32 MM) WIDTH SERIES CHANNEL

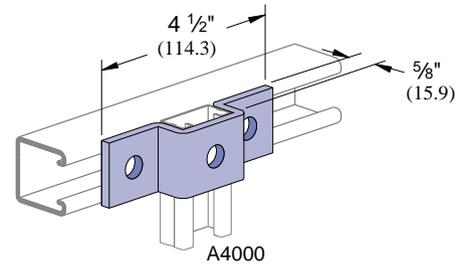


## A3347



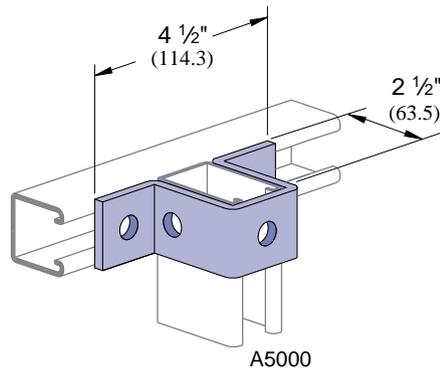
Wt/C 37 Lbs (16.8 kg)

## A4047



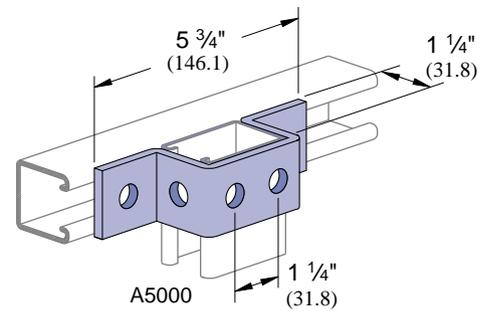
Wt/C 34 Lbs (15.4 kg)

## A5047



Wt/C 58 Lbs (26.3 kg)

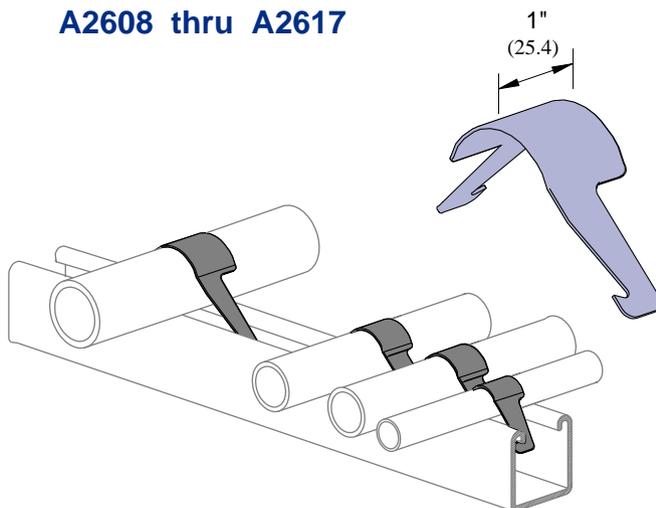
## A5043



Wt/C 50 Lbs (22.7 kg)

## A2608 thru A2617

UNI-CLIP®



Part Number	Pipe Size		O.D. Size		Weight/C	
	In	mm	In	mm	Lbs	kg
A2608	1/4	6.4	0.540	13.7	0.6	0.3
A2609	3/8	9.5	0.675	17.1	0.7	0.3
A2611	1/2	12.7	0.840	21.3	1.0	0.5
A2612	3/4	19.1	1.050	26.7	1.4	0.6
A2613	1	25.4	1.315	33.4	2.0	0.9
A2614	1 1/4	31.8	1.660	42.2	2.4	1.1
A2615	1 1/2	38.1	1.900	48.3	3.2	1.5
A2617	2	50.8	2.375	60.3	4.7	2.1

Stainless steel, Type 301.  
Patent No. 2863625.

Hole Size	Hole Spacing	Width	Thickness
1 3/32" Diameter 10.3 mm	5/8" (15.9 mm) From End 1 1/2" (38.1 mm) On Center	1 1/4" 31.8 mm	3/16" 4.8 mm

# BRACKETS

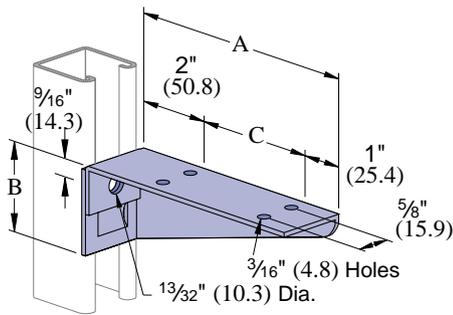
FOR 1 1/4" (32 MM) WIDTH SERIES CHANNEL



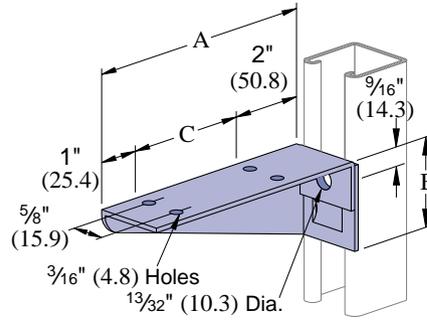
**A2491 R-L**

**A2492 R-L**

**A2493 R-L**



Right



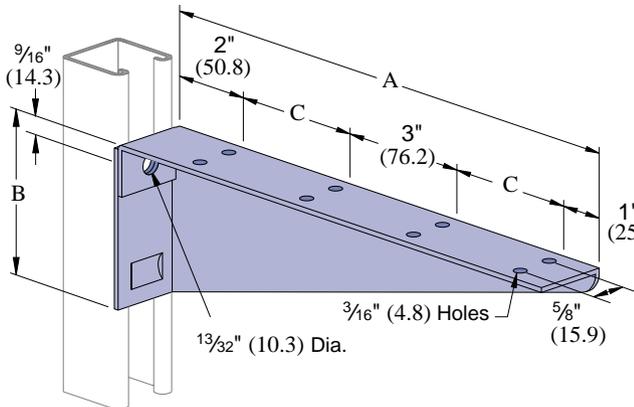
Left

Material: 14 Gage Steel.

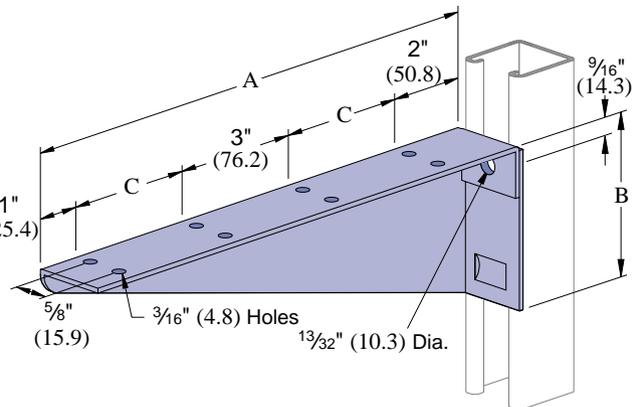
Design Uniform Load (Channel Upright Listed)	
<b>A1000</b>	200 Lbs (.9 kN)
<b>A4000</b>	130 Lbs (.6 kN)
Safety Factor of 2 1/2	

Part Number	"A"		"B"		"C"		Weight/C	
	In	mm	In	mm	In	mm	Lbs	kg
<b>A2491 R-L</b>	6	152.4	2	50.8	3	76.2	38	17.2
<b>A2492 R-L</b>	8	203.2	2 1/2	63.5	5	127.0	56	25.4
<b>A2493 R-L</b>	10	254.0	3	76.2	7	177.8	73	33.1

## A2494 R-L thru A2497 R-L



Right



Left

Material: 14 Gage Steel.

Design Uniform Load (Channel Upright Listed)	
<b>A1000</b>	200 Lbs (.9 kN)
<b>A4000</b>	130 Lbs (.6 kN)
Safety Factor of 2 1/2	

Part Number	"A"		"B"		"C"		Weight/C	
	In	mm	In	mm	In	mm	Lbs	kg
<b>A2494 R-L</b>	12	304.8	3 1/2	88.9	3	76.2	94	42.6
<b>A2495 R-L</b>	14	355.6	4	101.6	4	101.6	105	47.6
<b>A2496 R-L</b>	16	406.4	4 1/2	114.3	5	127.0	145	65.8
<b>A2497 R-L</b>	18	457.2	5	127.0	6	152.4	175	79.4

	Page
13/16" Width Channel Series	199
Channel Nuts	203
End Caps & Closure Strip	203
General Fittings	204



### MATERIAL

Channels are accurately and carefully cold formed to size from low-carbon strip steel.

#### STEEL: PLAIN

19 Gage (1.0 mm) ASTM A366

#### STEEL: PRE-GALVANIZED

19 Gage (1.0 mm)  
ASTM A653 GR 33

All nuts are manufactured from mild steel bars conforming to ASTM A570 GR 33.

Fittings are made from hot rolled, pickled and oiled steel plate or strip and conform to ASTM A570 GR 33.

### FINISHES

Channels are available in: Perma-

Green II (GR), electro-galvanized (EG), with zinc electrolytically to commercial standards ASTM B633 Type III SC1; Pre-galvanized (PG), conforming to ASTM A653 GR 33 and plain (PL). Nuts are available in plain or electro-galvanized (EG) finish. Fittings are available in Perma-Green II, electrogalvanized (EG) or plain.

### STANDARD LENGTHS

P-6000 – 16 Feet (4.88m)

P-7000 – 10 Feet (3.05m)

Tolerances are +1/8" (3.2 mm) to +1/2" (12.7 mm) to allow for cutting. Special lengths are available for a small cutting charge with a tolerance of ±1/8" (3.2mm).

### APPLICATION

A unique half-size reduction of the 1 3/8" channel width series, this smaller

channel size can be used to carry light loads economically in applications such as instrumentation, retail displays and light-duty laboratory supports. It also provides the flexibility found in all Unistrut® framing systems.

### DESIGN BOLT TORQUE

BOLT SIZE	FOOT LBS.	N·m
1/4" 20	6	8

### DIMENSIONS

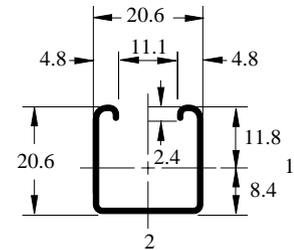
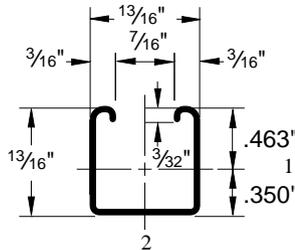
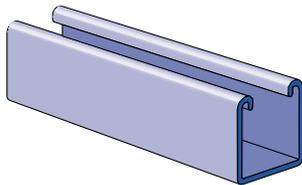
Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

# P6000 CHANNEL & COMBINATIONS

FOR 13/16" (21 MM) WIDTH SERIES CHANNEL

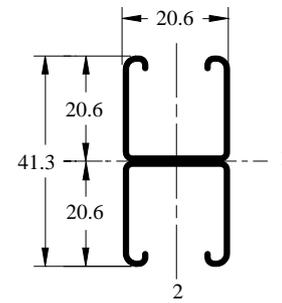
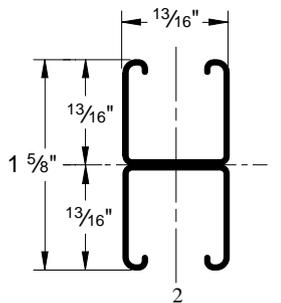
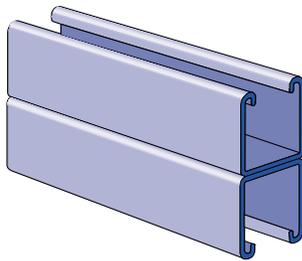


## P6000



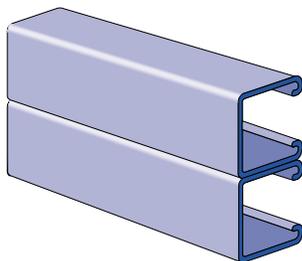
Weight: 37 Lbs/C Ft (55 kg/100m)

## P6001

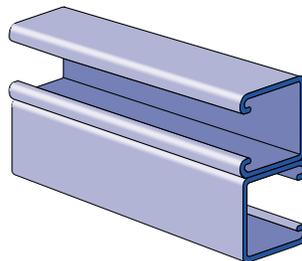


Weight: 73 Lbs/C Ft (109 kg/100m)

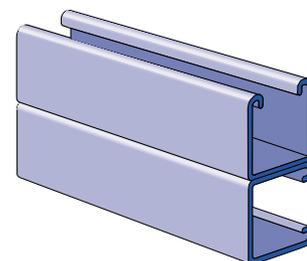
### P6001 A



### P6001 B



### P6001 C



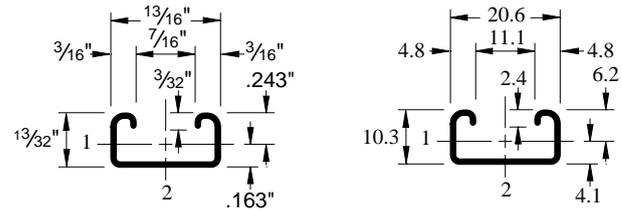
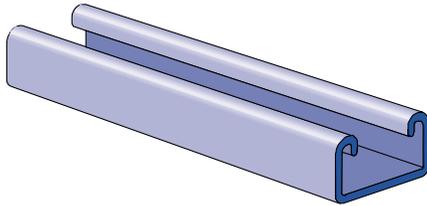
Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths	Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N*m	In	mm		PL	GR	HG	PG	SS	EA
P6000	.37	.55	500	60	.040	1.0	16'	■	■		■	■	■
P6001	.73	1.09	1,360	150	.040	1.0	16'	■	■		■		■

# P7000 & P7001 CHANNELS

FOR  $\frac{13}{16}$ " (21 MM) WIDTH SERIES CHANNEL

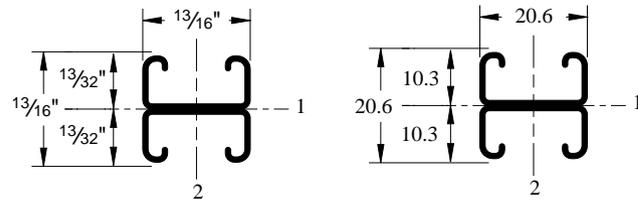
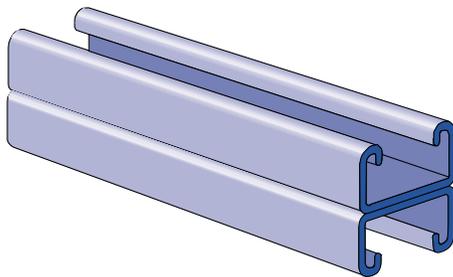


## P7000



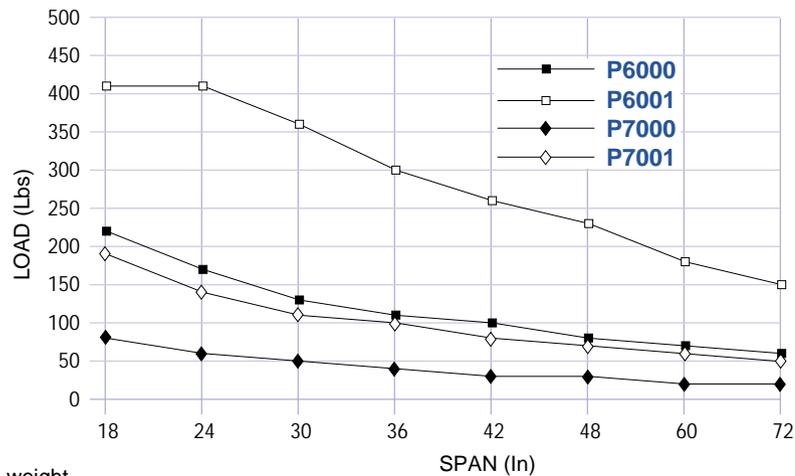
Weight: 26 Lbs/C Ft (39 kg/100m)

## P7001



Weight: 52 Lbs/C Ft (77 kg/100m)

## LOAD GRAPH\*



\* Maximum allowable uniform load weight.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths	Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N·m	In	mm		PL	GR	HG	PG	SS	EA
P7000	.260	.39	180	20	.040	1.0	10'	■	■		■	■	■
P7001	.520	.77	430	50	.040	1.0	10'	■	■		■		■

# P6000 & P7000 SERIES CHANNELS

FOR 1<sup>3</sup>/<sub>16</sub>" (21 MM) WIDTH SERIES CHANNEL



## BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
18	457	P6000	220	1.0	0.06	2	220	1.0	220	1.0	170	0.8
		P6001	410*	1.8	0.02	1	410	1.8	410	1.8	410	1.8
		P7000	80	0.4	0.10	3	80	0.4	60	0.3	40	0.2
		P7001	190	0.8	0.07	2	190	0.8	190	0.8	140	0.6
24	610	P6000	170	0.8	0.12	3	170	0.8	150	0.7	100	0.4
		P6001	410*	1.8	0.06	1	410	1.8	410	1.8	410	1.8
		P7000	60	0.3	0.18	5	40	0.2	30	0.1	20	0.1
		P7001	140	0.6	0.12	3	140	0.6	110	0.5	80	0.4
30	762	P6000	130	0.6	0.17	4	130	0.6	90	0.4	60	0.3
		P6001	360	1.6	0.10	2	360	1.6	360	1.6	310	1.4
		P7001	110	0.5	0.19	5	100	0.4	70	0.3	50	0.2
36	914	P6000	110	0.5	0.25	6	90	0.4	70	0.3	40	0.2
		P6001	300	1.3	0.14	4	300	1.3	300	1.3	210	0.9
		P7001	100	0.4	0.29	7	70	0.3	50	0.2	30	0.1
42	1067	P6000	100	0.4	0.36	9	60	0.3	50	0.2	30	0.1
		P6001	260	1.2	0.19	5	260	1.2	240	1.1	160	0.7
		P7001	80	0.4	0.37	9	50	0.2	40	0.2	20	0.1
48	1219	P6000	80	0.4	0.43	11	50	0.2	40	0.2	20	0.1
		P6001	230	1.0	0.26	6	230	1.0	180	0.8	120	0.5
		P7001	70	0.3	0.49	12	40	0.2	30	0.1	20	0.1
60	1524	P6000	70	0.3	0.74	19	30	0.1	20	0.1	20	0.1
		P6001	180	0.8	0.39	10	150	0.7	120	0.5	80	0.4
72	1829	P6001	150	0.7	0.56	14	110	0.5	80	0.4	50	0.2

\* Load limited by spot weld shear.

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.

## ELEMENTS OF SECTION

Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In <sup>2</sup>	cm <sup>2</sup>	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm	In <sup>4</sup>	cm <sup>4</sup>	In <sup>3</sup>	cm <sup>3</sup>	In	cm
P6000	.105	.68	.009	.4	.020	.33	.294	.75	.012	.5	.029	.48	.333	.85
P6001	.211	1.36	.044	1.8	.054	.88	.457	1.16	.023	1.0	.057	.93	.333	.85
P7000	.073	.47	.002	.1	.007	.11	.148	.38	.007	.3	.017	.28	.306	.78
P7001	.146	.94	.007	.3	.017	.28	.220	.56	.014	.6	.034	.56	.306	.78

I - Moment of Inertia

S - Section Modulus

r - Radius of Gyration

# P6000 & P7000 SERIES CHANNELS

FOR 1<sup>3</sup>/<sub>16</sub>" (21 MM) WIDTH SERIES CHANNEL

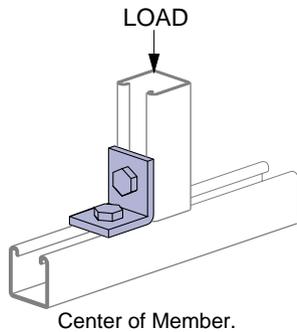


## COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
18	457	P6000	520	2.3	1120	5.0	1090	4.8	1030	4.6	960	4.3
		P6001	1170	5.2	4410	19.6	4300	19.1	4130	18.4	3920	17.4
		P7000	280	1.2	530	2.4	520	2.3	500	2.2	480	2.1
		P7001	680	3.0	2870	12.8	2700	12.0	2420	10.8	2080	9.3
24	610	P6000	380	1.7	630	2.8	610	2.7	580	2.6	540	2.4
		P6001	1130	5.0	4250	18.9	4060	18.1	3750	16.7	3370	15.0
		P7000	190	0.8	300	1.3	290	1.3	280	1.2	270	1.2
		P7001	610	2.7	2610	11.6	2320	10.3	1820	8.1	1290	5.7
30	762	P6000	280	1.2	400	1.8	390	1.7	370	1.6	350	1.6
		P6001	1080	4.8	4040	18.0	3750	16.7	3260	14.5	2670	11.9
		P7000	140	0.6	190	0.8	190	0.8	**	**	**	**
		P7001	530	2.4	2290	10.2	1820	8.1	1190	5.3	830	3.7
36	914	P6000	210	0.9	280	1.2	270	1.2	260	1.2	240	1.1
		P6001	1020	4.5	3790	16.9	3370	15.0	2670	11.9	1900	8.5
		P7000	100	0.4	130	0.6	130	0.6	**	**	**	**
		P7001	450	2.0	1890	8.4	1290	5.7	830	3.7	570	2.5
42	1067	P6000	160	0.7	210	0.9	200	0.9	190	0.8	180	0.8
		P6001	950	4.2	3500	15.6	2920	13.0	2010	8.9	1400	6.2
		P7001	380	1.7	1440	6.4	950	4.2	610	2.7	**	**
		P6000	130	0.6	160	0.7	150	0.7	140	0.6	130	0.6
48	1219	P6001	860	3.8	3150	14.0	2400	10.7	1540	6.9	1070	4.8
		P7001	320	1.4	1100	4.9	730	3.2	**	**	**	**
		P6000	90	0.4	100	0.4	100	0.4	**	**	**	**
		P6001	700	3.1	2330	10.4	1540	6.9	990	4.4	**	**
60	1524	P6000	90	0.4	100	0.4	100	0.4	**	**	**	**
		P6001	700	3.1	2330	10.4	1540	6.9	990	4.4	**	**
72	1829	P6000	70	0.3	70	0.3	70	0.3	**	**	**	**
		P6001	570	2.5	1620	7.2	1070	4.8	**	**	**	**

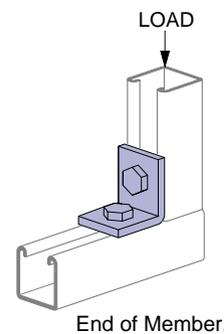
\*\* $\frac{KL}{T} > 200$

## LOAD DATA FOR UNISTRUT SECTIONS SUBJECT TO CRUSHING LOADS



Channel	Recommended Load	
	Lbs	kN
P6000	1000	4.4
P7000	1300	5.8

Safety Factor of 2<sup>1</sup>/<sub>2</sub>



Channel	Recommended Load	
	Lbs	kN
P6000	700	3.1
P7000	900	4.0

Safety Factor of 2<sup>1</sup>/<sub>2</sub>

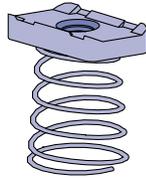
# CHANNEL NUTS & END CAPS

FOR 13/16" (21 MM) WIDTH SERIES CHANNEL



**P6000-0832**  
thru  
**P6006-1420**

CHANNEL NUT WITH SPRING



**P7006-0832**  
thru  
**P7006-1420**

CHANNEL NUT WITH SPRING



Nut Size/ Thread	Max. Allowable Pull-out		Resistance To Slip		Torque	
	Lbs	kN	Lbs	kN	Ft/Lbs	N•m
1/4"-20	250	1.1	150	0.7	6	8

For use with P6000 channels.

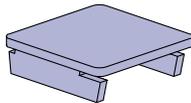
Part Number	Thread Size	Weight per 100	
		Lbs	kg
<b>P6006-0836</b>	#8 - 36	1	0.5
<b>P6006-0832</b>	#8 - 32	1	0.5
<b>P6006-1032</b>	#10 - 32	1	0.5
<b>P6006-1024</b>	#10 - 24	1	0.5
<b>P6006-1420</b>	1/4" - 20	1	0.5

For use with P7000 channels.

Part Number	Thread Size	Weight per 100	
		Lbs	Kg
<b>P7006-0836</b>	#8 - 36	1	0.5
<b>P7006-0832</b>	#8 - 32	1	0.5
<b>P7006-1032</b>	#10 - 32	1	0.5
<b>P7006-1024</b>	#10 - 24	1	0.5
<b>P7006-1420</b>	1/4" - 20	1	0.5

**P6280**

END CAP FOR P6000

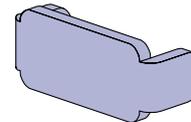


Material: .060" (1.5)

Wt/C 3 Lbs (1.4 kg)

**P7280**

END CAP FOR P7000

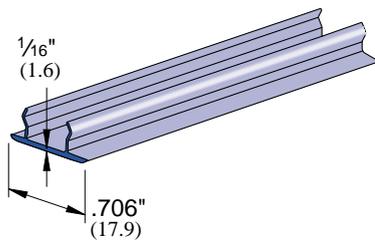


Material: .048" (1.2)

Wt/C 1 Lbs (0.5 kg)

**P6184 P**

CLOSURE STRIP



Material: Plastic.

Standard Length:  
10 Feet (3.05 m).

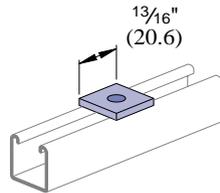
Wt/C Ft 4 Lbs (6.0 kg/100m)

# FLAT PLATE FITTINGS

FOR  $1\frac{3}{16}$ " (21 MM) WIDTH SERIES CHANNEL

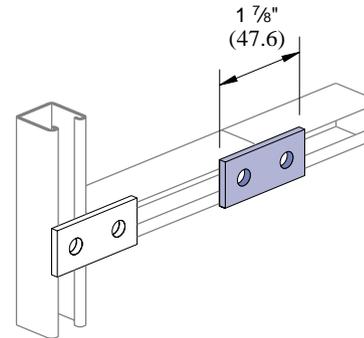


**P6062**



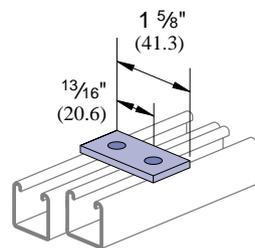
Wt/C 2 Lbs (0.9 kg)

**P6065**



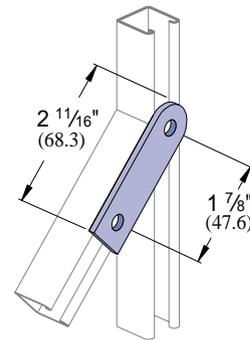
Wt/C 5 Lbs (2.3 kg)

**P6924**



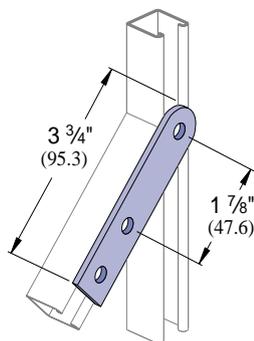
Wt/C 5 Lbs (2.3 kg)

**P7325**



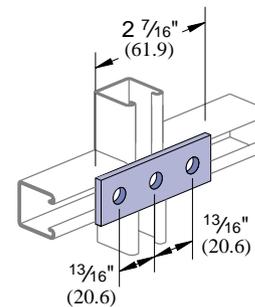
Wt/C 7 Lbs (3.2 kg)

**P7324**



Wt/C 10 Lbs (4.5 kg)

**P6925**



Wt/C 7 Lbs (3.2 kg)

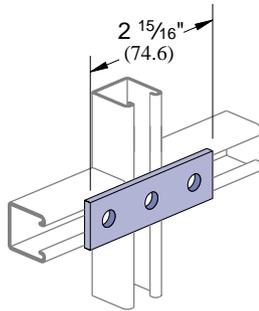
Hole Size	Hole Spacing	Width	Thickness
$\frac{9}{32}$ " Diameter 7.1 mm	$1\frac{3}{32}$ " (10.3 mm) From End $1\frac{1}{16}$ " (27.0 mm) On Center	$1\frac{3}{16}$ " 20.6 mm	$\frac{1}{8}$ " 3.2 mm

# FLAT PLATE FITTINGS

FOR  $1\frac{3}{16}$ " (21 MM) WIDTH SERIES CHANNEL

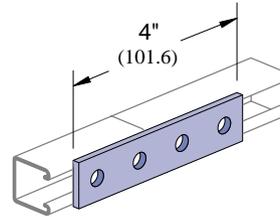


**P6066**



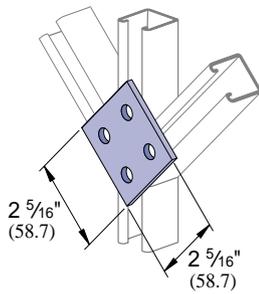
Wt/C 8 Lbs (3.6 kg)

**P6067**



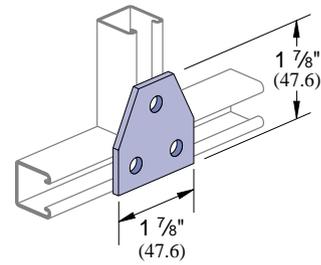
Wt/C 11 Lbs (5.0 kg)

**P6962**



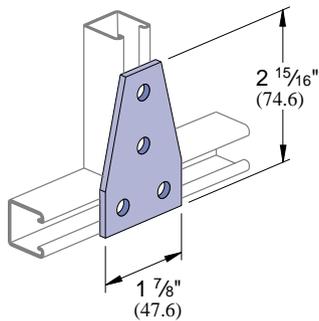
Wt/C 19 Lbs (8.6 kg)

**P6356 A**



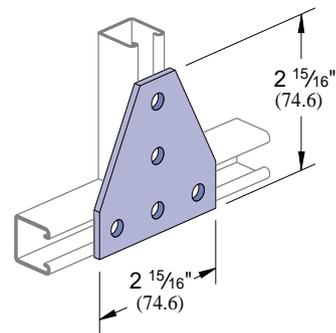
Wt/C 10 Lbs (4.5 kg)

**P6358 A**



Wt/C 15 Lbs (6.8 kg)

**P6726 A**



Wt/C 22 Lbs (10.0 kg)

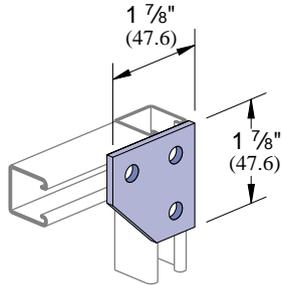
Hole Size	Hole Spacing	Width	Thickness
$\frac{9}{32}$ " Diameter 7.1 mm	$1\frac{3}{32}$ " (10.3 mm) From End $1\frac{1}{16}$ " (27.0 mm) On Center	$1\frac{3}{16}$ " 20.6 mm	$\frac{1}{8}$ " 3.2 mm

# FLAT PLATE FITTINGS

FOR  $1\frac{3}{16}$ " (21 MM) WIDTH SERIES CHANNEL

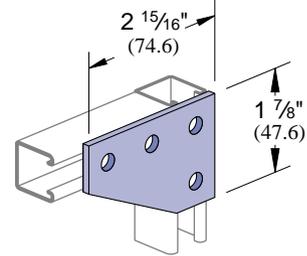


**P6334**



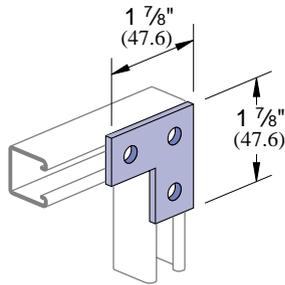
Wt/C 11 Lbs (5.0 kg)

**P6380**



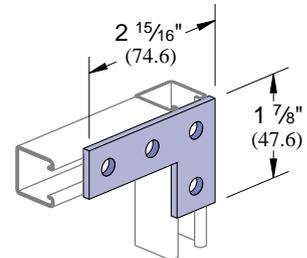
Wt/C 15 Lbs (6.8 kg)

**P6036**



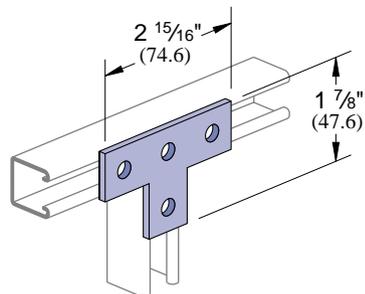
Wt/C 8 Lbs (3.6 kg)

**P6380 A**



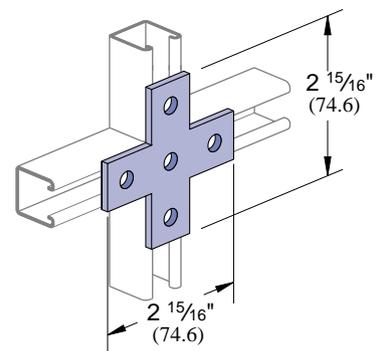
Wt/C 11 Lbs (5.0 kg)

**P6031**



Wt/C 11 Lbs (5.0 kg)

**P6028**



Wt/C 14 Lbs (6.4 kg)

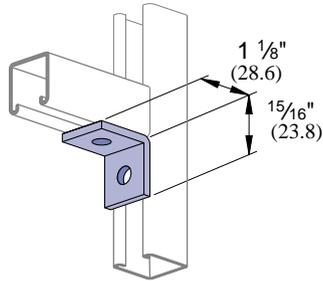
Hole Size	Hole Spacing	Width	Thickness
$\frac{9}{32}$ " Diameter 7.1 mm	$1\frac{3}{32}$ " (10.3 mm) From End $1\frac{1}{16}$ " (27.0 mm) On Center	$1\frac{3}{16}$ " 20.6 mm	$\frac{1}{8}$ " 3.2 mm

# NINETY DEGREE FITTINGS

FOR  $1\frac{3}{16}$ " (21 MM) WIDTH SERIES CHANNEL

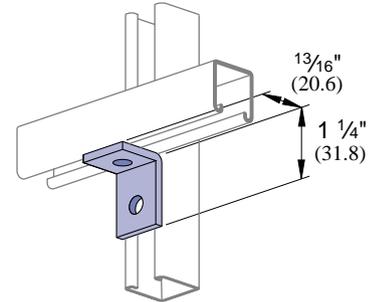


## P6026



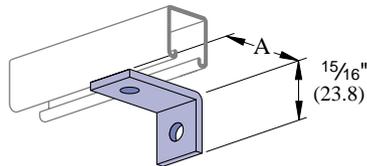
Wt/C 5 Lbs (2.3 kg)

## P6068



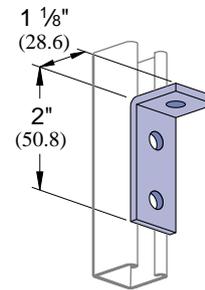
Wt/C 5 Lbs (2.3 kg)

## P6281 P6282 P6283



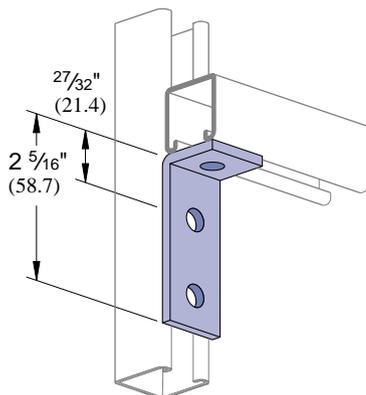
Part Number	"A"		Weight	
	In	mm	Lbs	kg
P6281	2	50.8	8	3.6
P6282	2½	63.5	9	4.1
P6283	3	76.2	10	4.5

## P6069



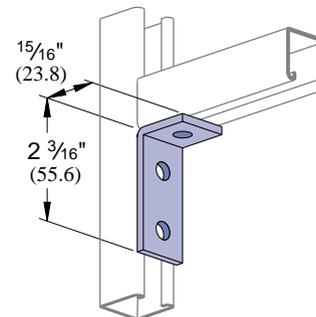
Wt/C 8 Lbs (3.6 kg)

## P6326



Wt/C 8 Lbs (3.6 kg)

## P6346



Wt/C 8 Lbs (3.6 kg)

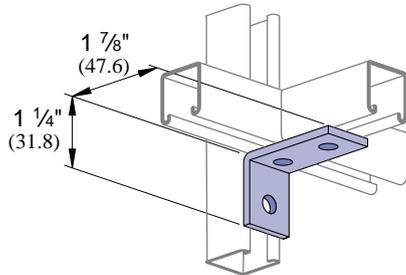
Hole Size	Hole Spacing	Width	Thickness
$\frac{9}{32}$ " Diameter 7.1 mm	$1\frac{3}{32}$ " (10.3 mm) From End $1\frac{1}{16}$ " (27.0 mm) On Center	$1\frac{3}{16}$ " 20.6 mm	$\frac{1}{8}$ " 3.2 mm

# NINETY DEGREE FITTINGS

FOR  $1\frac{3}{16}$ " (21 MM) WIDTH SERIES CHANNEL

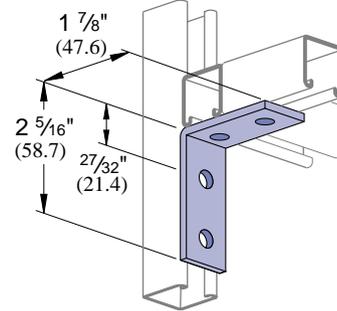


**P6458**



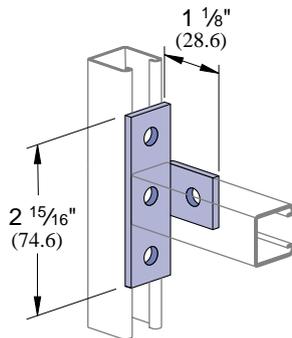
Wt/C 8 Lbs (3.6 kg)

**P6325**



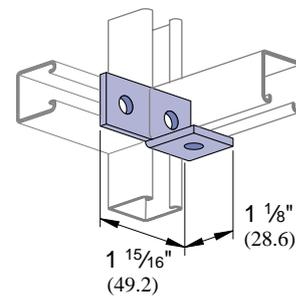
Wt/C 11 Lbs (5.0 kg)

**P6033**



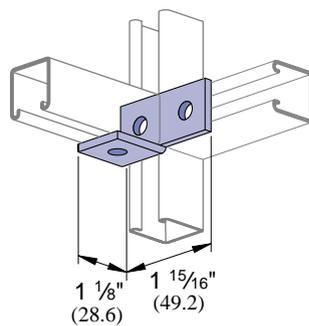
Wt/C 11 Lbs (5.0 kg)

**P6037**



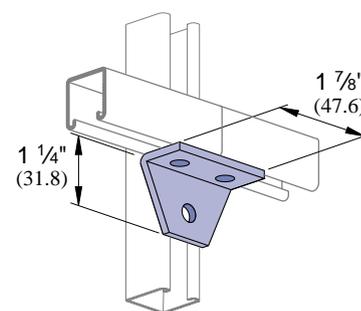
Wt/C 8 Lbs (3.6 kg)

**P6038**



Wt/C 8 Lbs (3.6 kg)

**P6357**



Wt/C 10 Lbs (4.5 kg)

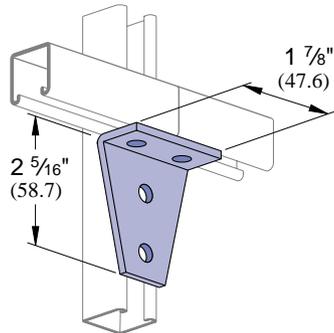
Hole Size	Hole Spacing	Width	Thickness
$\frac{9}{32}$ " Diameter 7.1 mm	$\frac{13}{32}$ " (10.3 mm) From End $1\frac{1}{16}$ " (27.0 mm) On Center	$1\frac{3}{16}$ " 20.6 mm	$\frac{1}{8}$ " 3.2 mm

# NINETY DEGREE FITTINGS

FOR  $1\frac{3}{16}$ " (21 MM) WIDTH SERIES CHANNEL

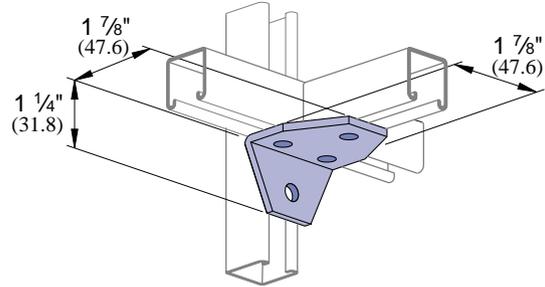


**P6359**



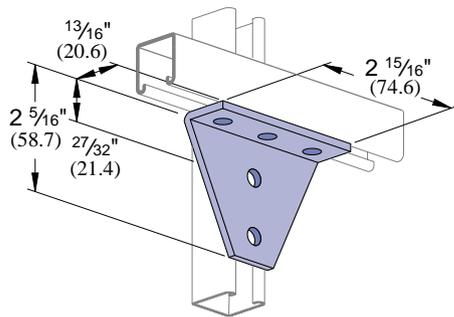
Wt/C 15 Lbs (6.8 kg)

**P6579**



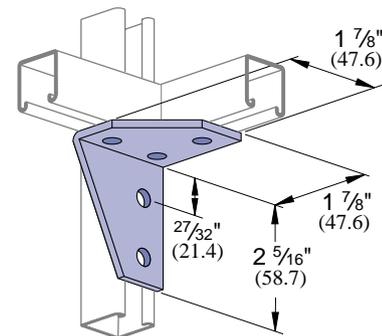
Wt/C 15 Lbs (6.8 kg)

**P6728**



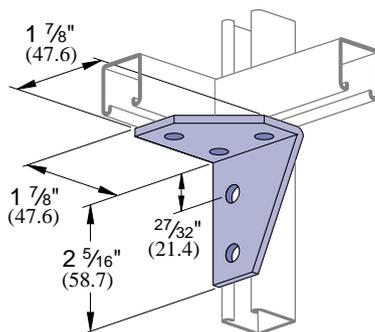
Wt/C 22 Lbs (10.0 kg)

**P6917**



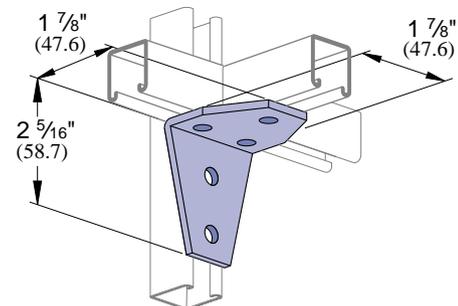
Wt/C 21 Lbs (9.5 kg)

**P6918**



Wt/C 21 Lbs (9.5 kg)

**P7235**



Wt/C 18 Lbs (8.2 kg)

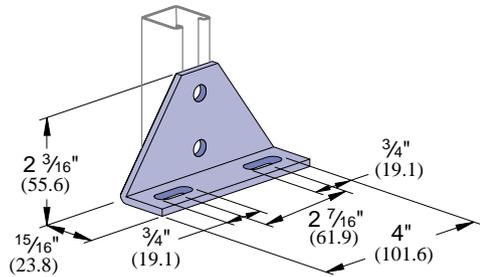
Hole Size	Hole Spacing	Width	Thickness
$\frac{9}{32}$ " Diameter 7.1 mm	$\frac{13}{32}$ " (10.3 mm) From End $1\frac{1}{16}$ " (27.0 mm) On Center	$\frac{13}{16}$ " 20.6 mm	$\frac{1}{8}$ " 3.2 mm

# NINETY DEGREE FITTINGS

FOR  $1\frac{3}{16}$ " (21 MM) WIDTH SERIES CHANNEL

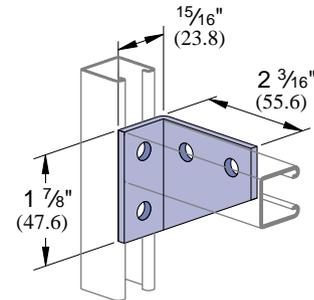


**P6130**



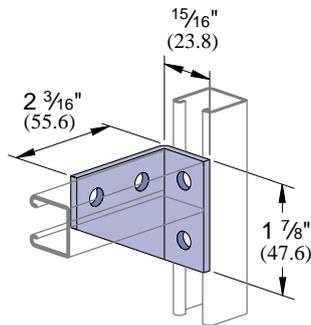
Wt/C 32 Lbs (14.5 kg)

**P6290**



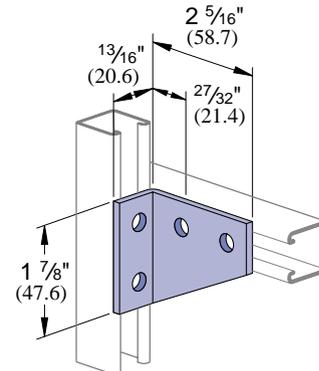
Wt/C 15 Lbs (6.8 kg)

**P6291**



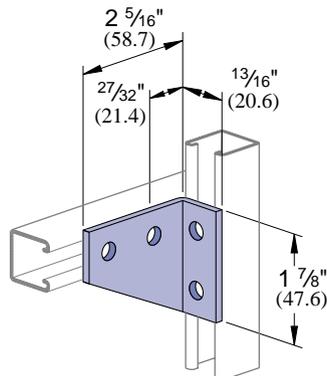
Wt/C 15 Lbs (6.8 kg)

**P6381**



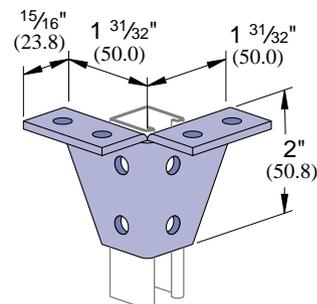
Wt/C 15 Lbs (6.8 kg)

**P6382**



Wt/C 15 Lbs (6.8 kg)

**P6887**



Wt/C 28 Lbs (12.7 kg)

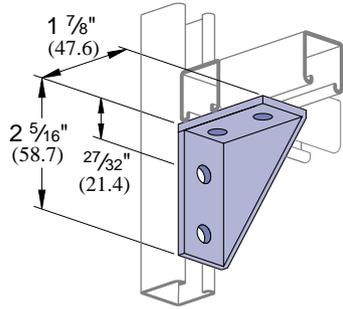
Hole Size	Hole Spacing	Width	Thickness
$\frac{9}{32}$ " Diameter 7.1 mm	$\frac{13}{32}$ " (10.3 mm) From End $1\frac{1}{16}$ " (27.0 mm) On Center	$\frac{13}{16}$ " 20.6 mm	$\frac{1}{8}$ " 3.2 mm

# NINETY DEGREE & ANGULAR FITTINGS

FOR  $1\frac{3}{16}$ " (21 MM) WIDTH SERIES CHANNEL

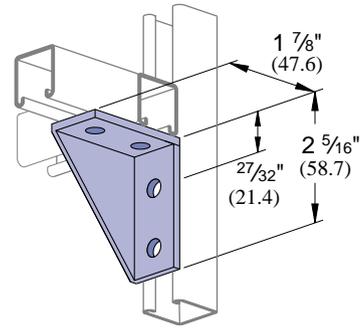


## P6331



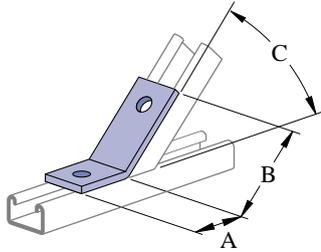
Wt/C 19 Lbs (8.6 kg)

## P6332



Wt/C 19 Lbs (8.6 kg)

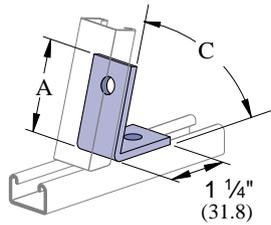
## P6546 P7097 P7098 P7100 P7101



Wt/C 8 Lbs (3.6 kg)

Part Number	"A"		"B"		"C"	
	In	mm	In	mm	Degree	rad
<b>P7097</b>	$1\frac{5}{16}$	23.8	$1\frac{13}{16}$	46.0	60°	.33π
<b>P7098</b>	$1\frac{1}{32}$	26.2	$1\frac{7}{8}$	47.6	52½°	.29π
<b>P6546</b>	$1\frac{3}{16}$	30.2	$1\frac{23}{32}$	43.7	45°	.25π
<b>P7100</b>	$1\frac{5}{16}$	33.3	$1\frac{19}{32}$	40.5	37½°	.21π
<b>P7101</b>	$1\frac{1}{32}$	26.2	$1\frac{7}{8}$	47.6	30°	.17π

## P6186 P7108 P7109 P7110



Wt/C 8 Lbs (3.6 kg)

Part Number	"A"		"C"	
	In	mm	Degree	rad
<b>P7108</b>	$1\frac{27}{32}$	46.8	60°	.33π
<b>P7109</b>	$1\frac{13}{16}$	46.0	52½°	.29π
<b>P6186</b>	$1\frac{13}{16}$	46.0	45°	.25π
<b>P7110</b>	$1\frac{13}{16}$	46.0	37½°	.21π

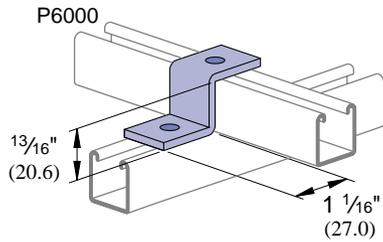
Hole Size	Hole Spacing	Width	Thickness
$\frac{9}{32}$ " Diameter 7.1 mm	$1\frac{3}{32}$ " (10.3 mm) From End $1\frac{1}{16}$ " (27.0 mm) On Center	$1\frac{3}{16}$ " 20.6 mm	$\frac{1}{8}$ " 3.2 mm

# "Z" SHAPE FITTINGS

FOR  $1\frac{3}{16}$ " (21 MM) WIDTH SERIES CHANNEL

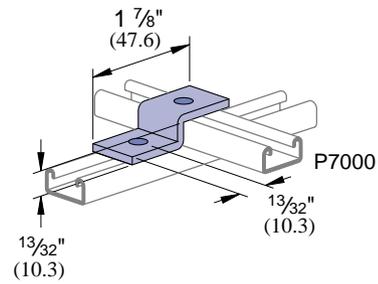


## P6045



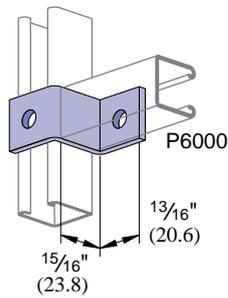
Wt/C 7 Lbs (3.2 kg)

## P7045



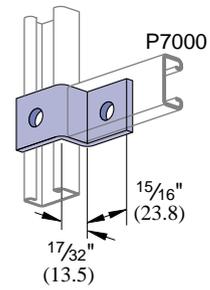
Wt/C 6 Lbs (2.7 kg)

## P6347



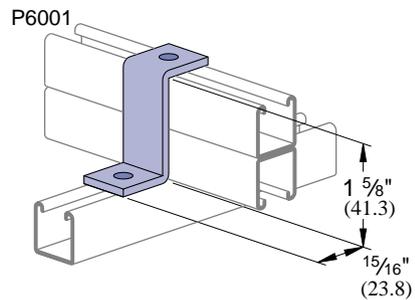
Wt/C 7 Lbs (3.2 kg)

## P7347



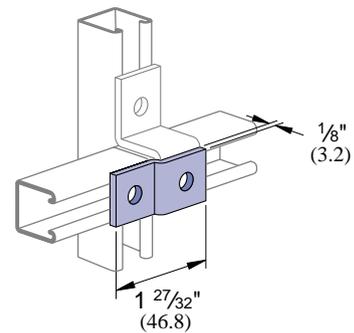
Wt/C 6 Lbs (2.7 kg)

## P6453



Wt/C 9 Lbs (4.1 kg)

## P6454



Wt/C 5 Lbs (2.3 kg)

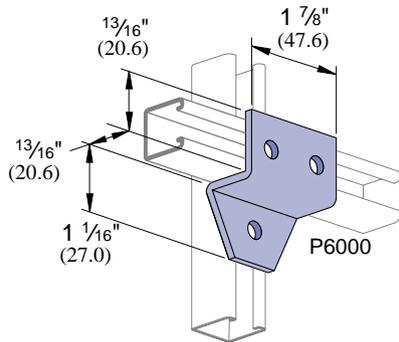
Hole Size	Hole Spacing	Width	Thickness
$\frac{9}{32}$ " Diameter 7.1 mm	$\frac{13}{32}$ " (10.3 mm) From End $1\frac{1}{16}$ " (27.0 mm) On Center	$\frac{13}{16}$ " 20.6 mm	$\frac{1}{8}$ " 3.2 mm

# "Z" AND "U" SHAPE FITTINGS

FOR  $\frac{13}{16}$ " (21 MM) WIDTH SERIES CHANNEL

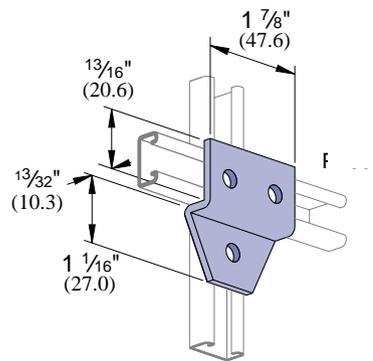


## P6758



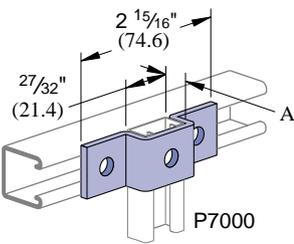
Wt/C 13 Lbs (5.9 kg)

## P7758



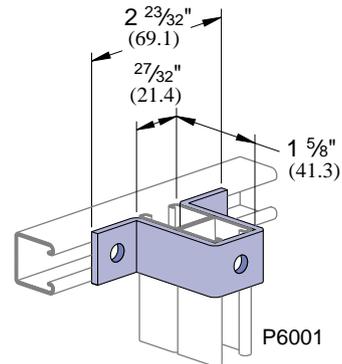
Wt/C 12 Lbs (5.4 kg)

## P6047 P7047



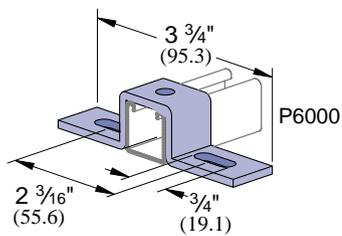
Part Number	"A"		Weight/C		For Use With
	In	mm	Lbs	kg	
P6047	$\frac{13}{16}$	20.6	12	5.4	P6000
P7047	$\frac{13}{32}$	10.3	10	4.5	P7000

## P637



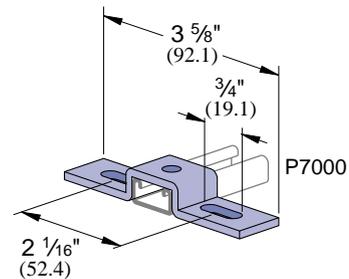
Wt/C 16 Lbs (7.3 kg)

## P6048



Wt/C 14 Lbs (6.4 kg)

## P7048



Wt/C 10 Lbs (4.5 kg)

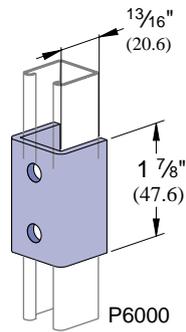
Hole Size	Hole Spacing	Width	Thickness
$\frac{9}{32}$ " Diameter 7.1 mm	$\frac{13}{32}$ " (10.3 mm) From End $\frac{1}{16}$ " (27.0 mm) On Center	$\frac{13}{16}$ " 20.6 mm	$\frac{1}{8}$ " 3.2 mm

# "U" SHAPE FITTINGS

FOR  $1\frac{3}{16}$ " (21 MM) WIDTH SERIES CHANNEL



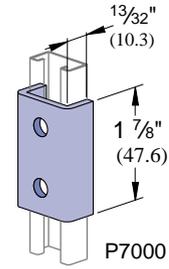
**P6376**



P6000

Wt/C 17 Lbs (7.7 kg)

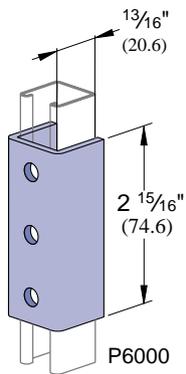
**P7376**



P7000

Wt/C 11 Lbs (5.0 kg)

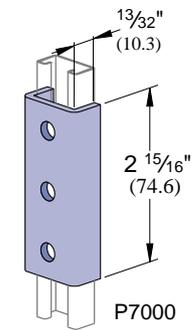
**P6376 A**



P6000

Wt/C 26 Lbs (11.8 kg)

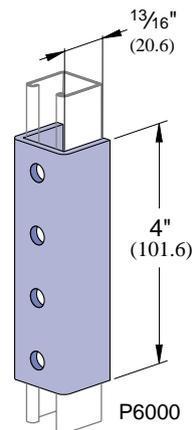
**P7376 A**



P7000

Wt/C 16 Lbs (7.3 kg)

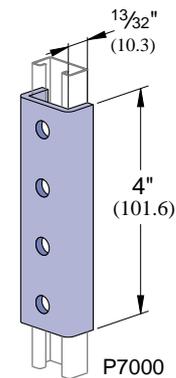
**P6377**



P6000

Wt/C 36 Lbs (16.3 kg)

**P7377**



P7000

Wt/C 24 Lbs (10.9 kg)

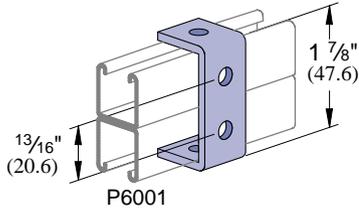
Hole Size	Hole Spacing	Width	Thickness
$\frac{9}{32}$ " Diameter 7.1 mm	$\frac{13}{32}$ " (10.3 mm) From End $1\frac{1}{16}$ " (27.0 mm) On Center	$1\frac{3}{16}$ " 20.6 mm	$\frac{1}{8}$ " 3.2 mm

# "U" SHAPE FITTINGS & SPECIAL APPLICATIONS

FOR  $1\frac{3}{16}$ " (21 MM) WIDTH SERIES CHANNEL

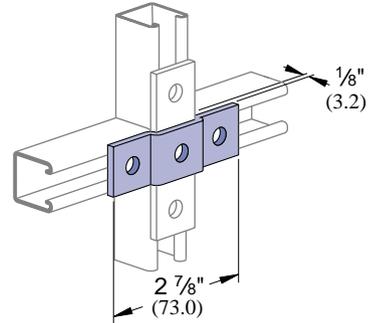


**P6044**



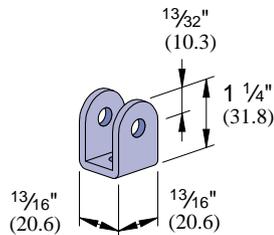
Wt/C 9 Lbs (4.1 kg)

**P6455**



Wt/C 8 Lbs (3.6 kg)

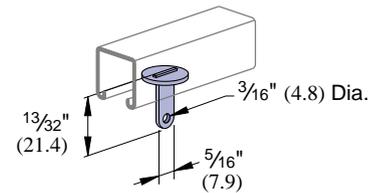
**P6973**



Wt/C 8 Lbs (3.6 kg)

**P6349**

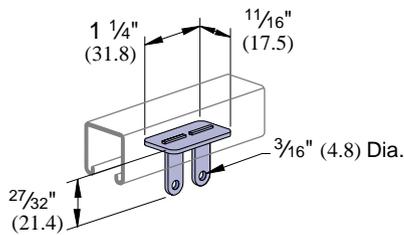
**ACETAL SLIDE**



Wt/C 1 Lbs (0.5 kg)

**P6353**

**ACETAL SLIDE**



Wt/C 1 Lbs (0.5 kg)

Hole Size	Hole Spacing	Width	Thickness
$\frac{9}{32}$ " Diameter 7.1 mm	$\frac{13}{32}$ " (10.3 mm) From End $1\frac{1}{16}$ " (27.0 mm) On Center	$\frac{13}{16}$ " 20.6 mm	$\frac{1}{8}$ " 3.2 mm

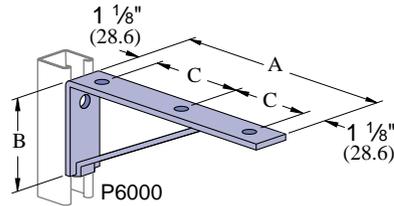
# BRACKETS, BEAM CLAMPS AND TUBING CLIPS

FOR  $1\frac{3}{16}$ " (21 MM) WIDTH SERIES CHANNEL



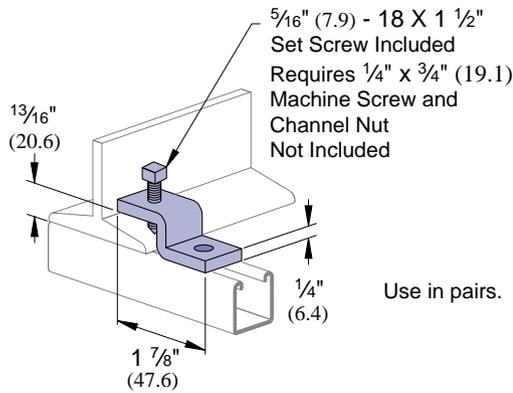
## P6127 - P6129

Safety Factor  
2½



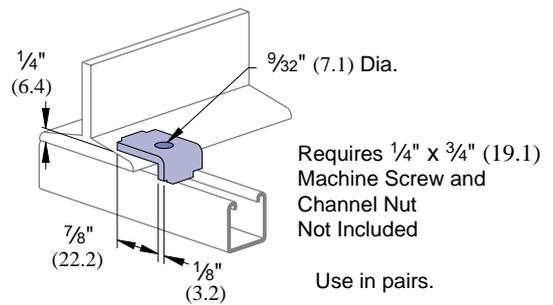
Part Number	Uniform Design Load		"A"		"B"		"C"		Weight/C	
	Lbs	kN	In	mm	In	mm	In	mm	Lbs	kg
<b>P6127</b>	150	.7	6½	165.1	2½	63.5	2½	63.5	30	13.6
<b>P6128</b>	150	.7	8½	215.9	3¼	82.6	3½	88.9	40	18.1
<b>P6129</b>	130	.6	10½	266.7	4	101.6	4½	114.3	50	22.7

## P6379 S



Wt/C 13 Lbs (5.9 kg)

## P6386



Wt/C 4 Lbs (1.8 kg)

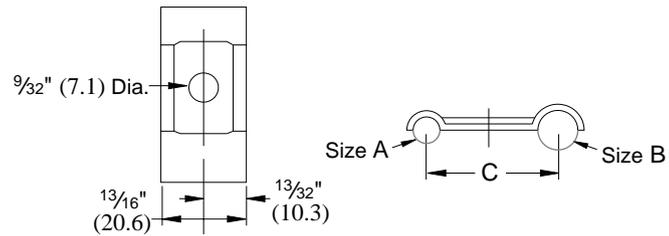
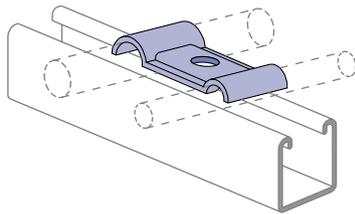
Hole Size	Hole Spacing	Width	Thickness
9/32" Diameter 7.1 mm	13/32" (10.3 mm) From End 1 1/16" (27.0 mm) On Center	13/16" 20.6 mm	1/8" 3.2 mm

# TUBING CLIPS

FOR  $\frac{13}{16}$ " (21 MM) WIDTH SERIES CHANNEL



## P6805 thru P6810

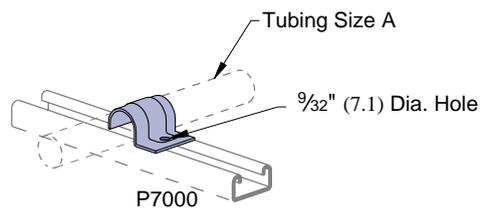


Part Number	O.D. Tube Size "A"		O.D. Tube Size "B"		"C"		Weight/C	
	In	mm	In	mm	In	mm	Lbs	kg
<b>P6805</b>	$\frac{1}{4}$	6.4	$\frac{1}{4}$	6.4	$\frac{3}{4}$	19.1	1	0.5
<b>P6806</b>	$\frac{3}{8}$	9.5	$\frac{3}{8}$	9.5	1	25.4	2	0.9
<b>P6807</b>	$\frac{1}{2}$	12.7	$\frac{1}{2}$	12.7	$1\frac{1}{4}$	31.8	3	1.4
<b>P6808</b>	$\frac{1}{4}$	6.4	$\frac{3}{8}$	9.5	$\frac{7}{8}$	22.2	2	0.9
<b>P6809</b>	$\frac{1}{4}$	6.4	$\frac{1}{2}$	12.7	1	25.4	2	0.9
<b>P6810</b>	$\frac{3}{8}$	9.5	$\frac{1}{2}$	12.7	$1\frac{1}{8}$	28.6	3	1.4

Material: 16 Gage (1.5)

## P7008 thru P7020

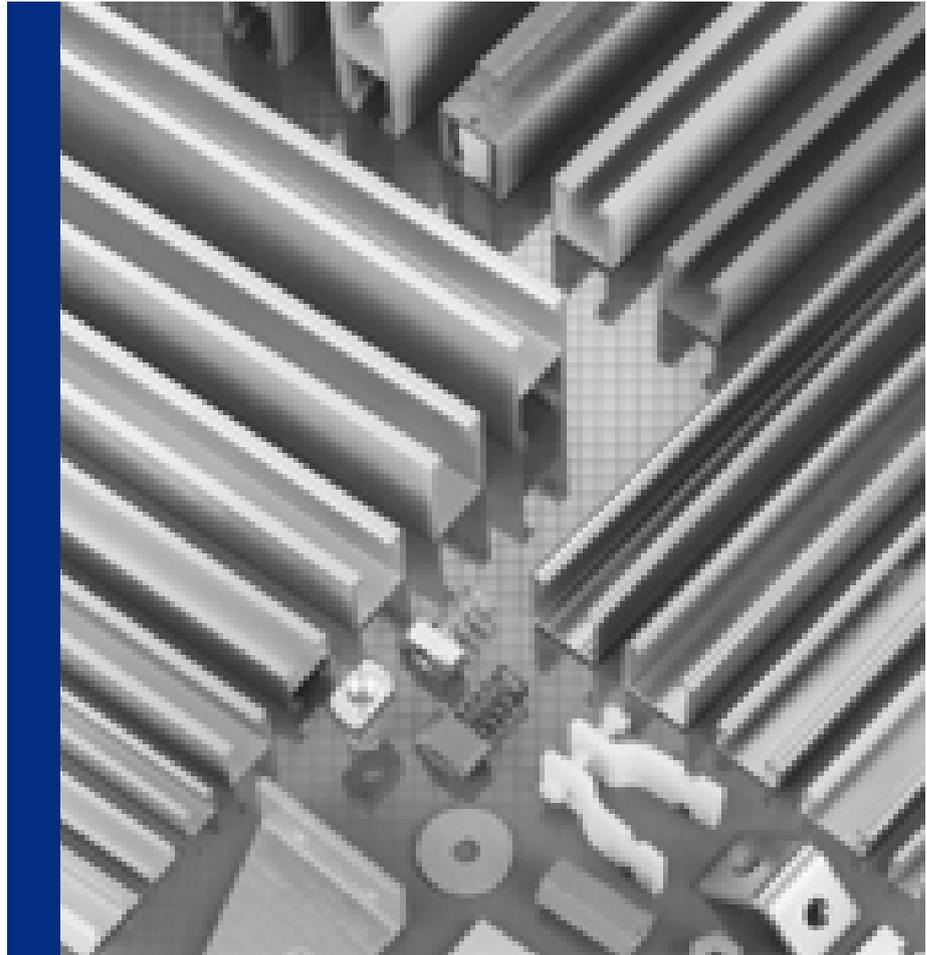
TUBING CLIPS



Part Number	O.D. Tube Size "A"		Weight/C	
	In	mm	Lbs	kg
<b>P7008</b>	$\frac{1}{4}$	6.4	1	.45
<b>P7009</b>	$\frac{5}{16}$	7.9	1	.45
<b>P7010</b>	$\frac{3}{8}$	9.5	2	.91
<b>P7012</b>	$\frac{1}{2}$	12.7	2	.91
<b>P7014</b>	$\frac{5}{8}$	15.9	3	1.4
<b>P7016</b>	$\frac{3}{4}$	19.1	4	1.8
<b>P7018</b>	$\frac{7}{8}$	22.6	5	2.3
<b>P7020</b>	1	25.4	5	2.3

Hole Size	Hole Spacing	Width	Thickness
$\frac{9}{32}$ " Diameter 7.1 mm	$\frac{13}{32}$ " (10.3 mm) From End $1\frac{1}{16}$ " (27.0 mm) On Center	$\frac{13}{16}$ " 20.6 mm	$\frac{1}{8}$ " 3.2 mm

	Page
Stainless Steel	220
Aluminum	223
Fiberglass	226



## MATERIAL

### STAINLESS STEEL

Channels: ASTM A 240 (Type 304)

Sintered nuts: ASTM B783 (Type 316N2-33)

Fittings: ASTM A240 (Type 304) or ASTM A276 (Type 304)

Type 316 stainless also available for most products. Contact factory for specific material availability.

### ALUMINUM

Channels (Extruded): ASTM B221 (Type 6063-T6)

Fittings: ASTM B209 (Type 1100F or Type 5052-H32)

Nuts: ASTM B221 (Type 6063-T5)

### FIBERGLASS

Components are available in fire-retardent Polyester or Vinylester resin systems, unless otherwise noted.

### LOAD DATA (BEAM & COLUMN)

To determine maximum allowable beam and column loading for channels in this section, multiply the load data in the appropriate mild steel channel sections of this catalog by the following factors:

CHANNEL MATERIAL	BEAM LOAD % FACTOR	COLUMN LOAD % FACTOR
EXTRUDED ALUMINUM	33.0%	33.0%
STAINLESS STEEL	100.0%	100.0%
FIBERGLASS	see p. 227	see p. 227

### LOAD DATA (SLIP & PULL OUT)

#### EXTRUDED ALUMINUM

To determine nut slip resistance, multiply load data for appropriate

nut by 75%. To determine nut pull-out load, multiply load data for appropriate nut by 50%.

#### STAINLESS STEEL

For design assistance, consult Unistrut customer engineering.

#### FIBERGLASS

See page 228 for nut slip resistance and pull-out strength.

### PRODUCT AVAILABILITY

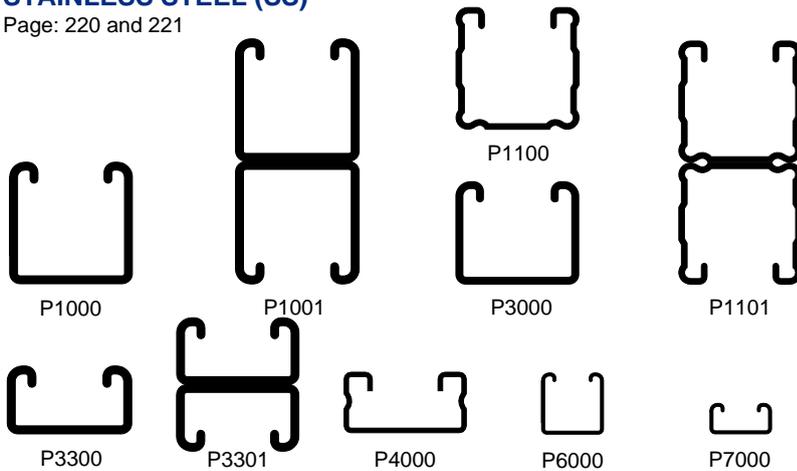
Most fittings and channels shown in this catalog, are available in aluminum or stainless steel. Consult factory for ordering information.

### DIMENSIONS

Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

## STAINLESS STEEL (SS)

Page: 220 and 221



### CHANNELS

Channels are available in both Type 304 and Type 316 stainless steel materials.

### CHANNEL NUTS

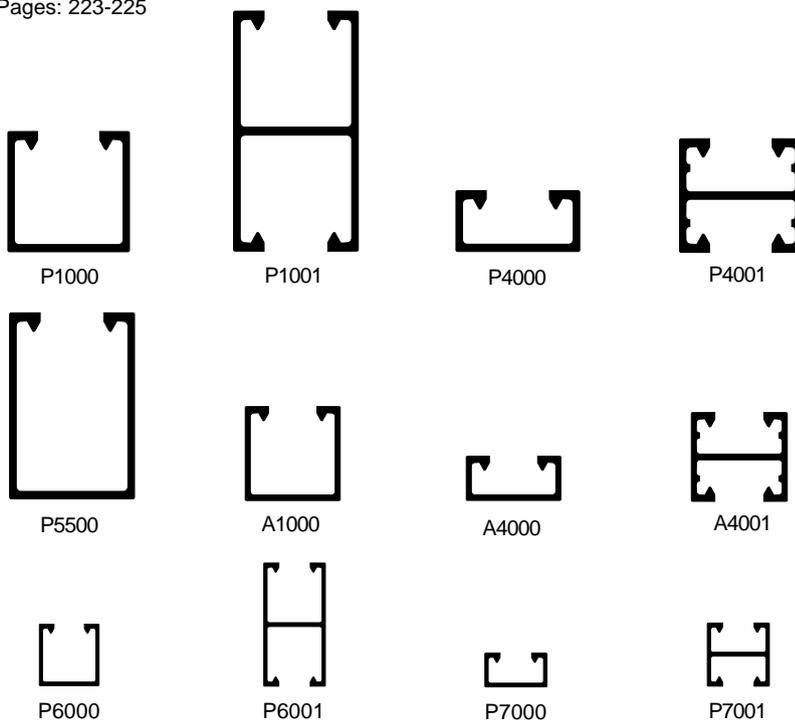
Stainless steel channel nuts are shown on page 222 of this catalog.

### FITTINGS

Most fittings as shown in this catalog are available in stainless steel.

## ALUMINUM (Extruded-EA)

Pages: 223-225



### CHANNELS

Extruded Aluminum channels are made from 6063-T6 material.

### CHANNEL NUTS

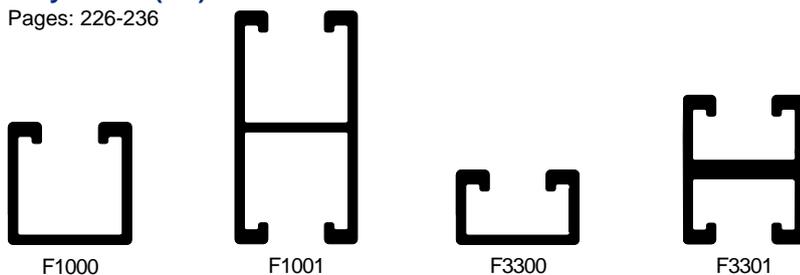
Use stainless steel channel nuts as shown on page 222.

### FITTINGS

Most fittings as shown in this catalog are available in aluminum.

## FIBERGLASS Polyester (PE) Vinyl Ester (VE)

Pages: 226-236



### CHANNELS

Fiberglass channels are available with choice of resins. To indicate resin choice for polyester, insert "PE" after the part number and "VE" for vinyl ester.

### CHANNEL NUTS

Channel nuts are available in vinyl ester resin only, see page 228.

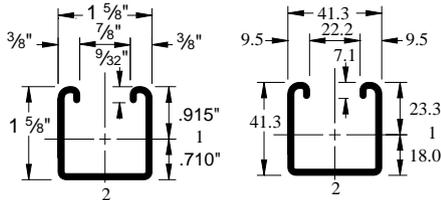
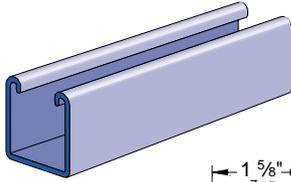
### FITTINGS

Fittings are available in choice of both resins, polyester (PE) and vinyl ester (VE), see page 229.

# STAINLESS STEEL CHANNELS

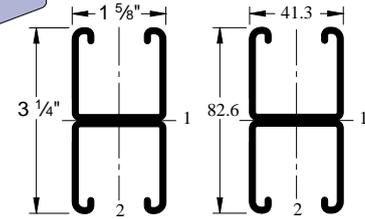
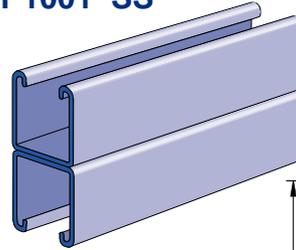


## P1000 SS



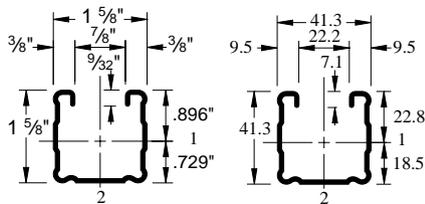
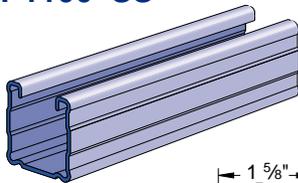
Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.105	2.7	■	■	190	283

## P1001 SS



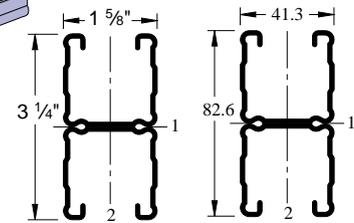
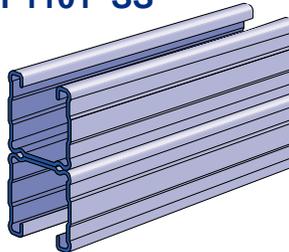
Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.105	2.7	■	■	380	566

## P1100 SS



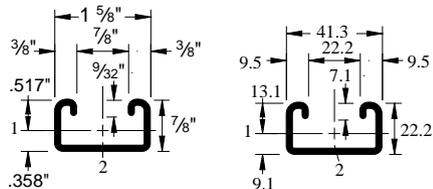
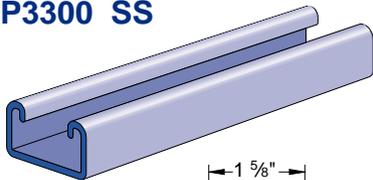
Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.075	1.9	■	■	142	211

## P1101 SS



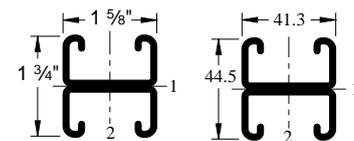
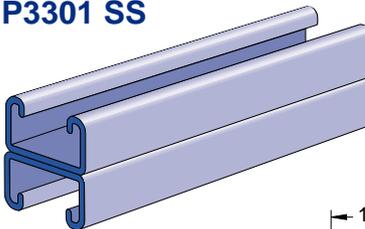
Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.075	1.9	■	■	284	422

## P3300 SS



Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.105	2.7	■	■	135	201

## P3301 SS

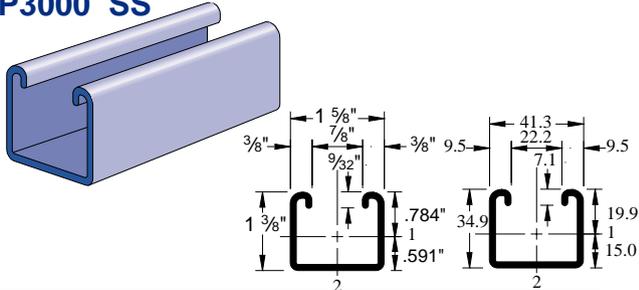


Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.105	2.7	■	■	270	402

# STAINLESS STEEL CHANNELS & CLOSURE

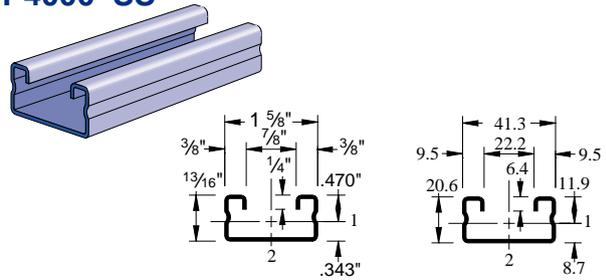


## P3000 SS



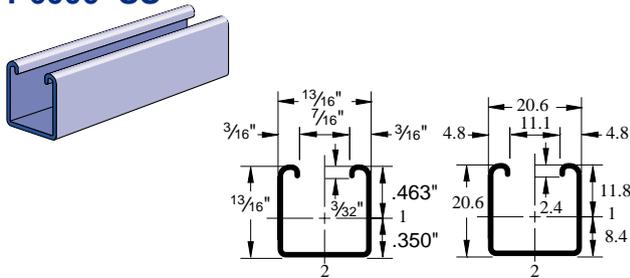
Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.105	2.7	■	■	170	253

## P4000 SS



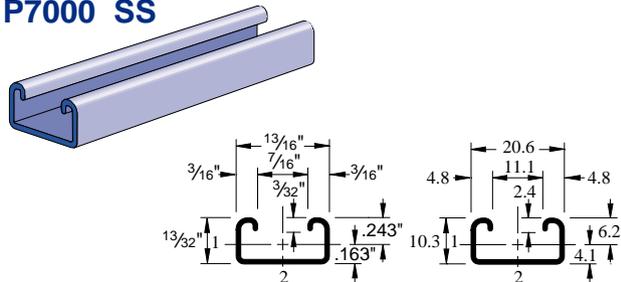
Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.060	1.5	■	■	82	122

## P6000 SS



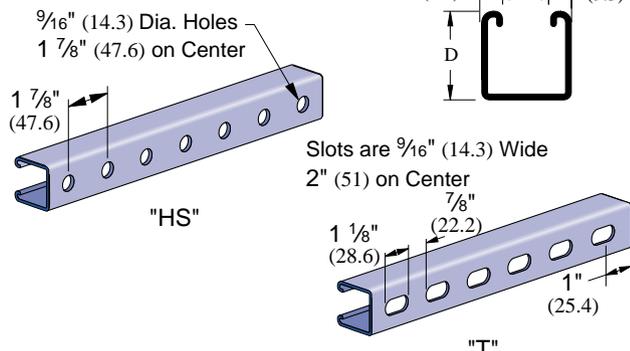
Material Type		Material Thickness		Standard Length	Weight/C	
304	316	In	mm		Lbs/Ft	kg/m
■	■	.040	1.0	16'	37	55

## P7000 SS



Material Type		Material Thickness		Standard Length	Weight/C	
304	316	In	mm		Lbs/Ft	kg/m
■	■	.040	1.0	10'	36	39

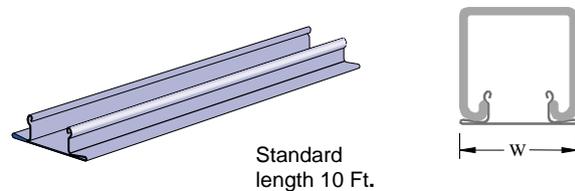
## "HS" SERIES SS, "T" SERIES SS



Part Number	Depth "D"		Material Thickness		Weight/C	
	In	mm	In	mm	Lbs/Ft	kg/m
P1000*	1 5/8	41	.105	2.7	185	275
P1100*	1 5/8	41	.075	1.6	136	202
P3000*	1 3/8	35	.105	1.6	165	112
P3300*	7/8	22	.105	2.7	130	193
P4000*	13/16	21	.060	1.5	79	110

## P1184 SS P6184 SS

### CLOSURE STRIP



Material: Stainless steel type 304.

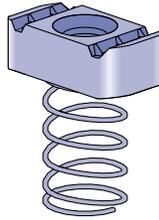
Part Number	Use with Channels	Width "W"		Weight/C	
		In	mm	Lbs/Ft	kg/m
P1184 SS	P1000, P1100, P3300, P4000	1 5/8	41	27	40
P6184 SS	P6000, P7000	13/16	21	10	15

\*Add suffix "T SS" or "HS SS" as required. For example: "P1000 T SS"

# STAINLESS STEEL CHANNEL NUTS



## P1006 U-1420 P1008 U P1010 U



For use with P1000, P1100, P2000, and P3000 channels.

Material: Sintered type 316 stainless steel with pre-galvanized spring.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
P1006 U-1420	1/4"-20	7	3.2
P1008 U	3/8"-16	10	4.5
P1010 U	1/2"-13	10	4.5

## P4006 U-1420 P4008 U P4010 U

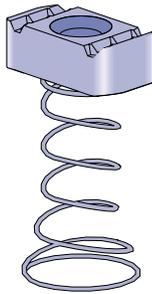


For use with P3300, P3301, P4000 and P4001 channels.

Material: Sintered type 316 stainless steel with pre-galvanized spring.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
P4006 U-1420	1/4"-20	7	3.2
P4008 U	3/8"-16	9	4.1
P4010 U	1/2"-13	9	4.1

## P5506 U-1420 P5508 U P5510 U



For use with P5500 channels.

Material: Sintered type 316 stainless steel with pre-galvanized spring.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
P5506 U-1420	1/4"-20	7	3.2
P5508 U	3/8"-16	10	4.5
P5510 U	1/2"-13	10	4.5

## A1006-1420 SS A1008 SS



For use with A1000 (1 1/4") channels.

Material: Wrought type 304 stainless steel with pre-galvanized spring.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
A1006-1420 SS	1/4"-20	6	2.7
A1008 SS	3/8"-16	6	2.7

## A4006-1420 SS A4008 SS

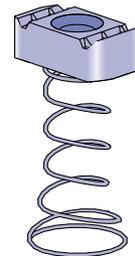


For use with A3300, A3301, A4000 and A4001 (1 1/4") channels.

Material: Wrought type 304 stainless steel with pre-galvanized spring.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
A4006-1420 SS	1/4"-20	5	2.3
A4008 SS	3/8"-16	5	2.3

## A5006-1420 SS A5008 SS



For use with A5000 (1 1/4") channels.

Material: Wrought type 304 stainless steel with pre-galvanized spring.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
A5006-1420 SS	1/4"-20	6	2.7
A5008 SS	3/8"-16	6	2.7

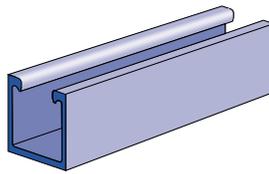
### NOTES

Most fittings, as shown in this catalog are available in stainless steel or aluminum. It is recommended that stainless steel channel nuts be used with aluminum channels. For channel nut pull-out and resistance to slip information, refer to page 69 and 218.

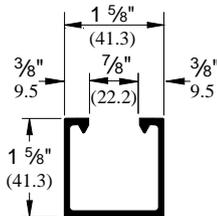
# EXTRUDED ALUMINUM CHANNELS



## P1000 EA

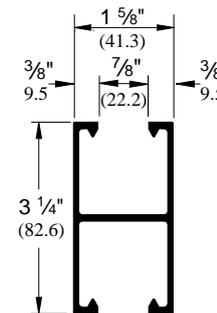
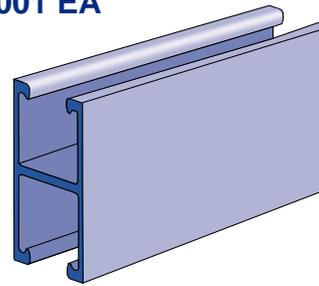


When used with P3184 EA.



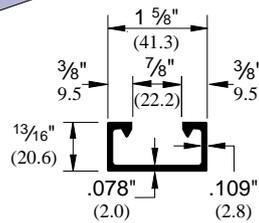
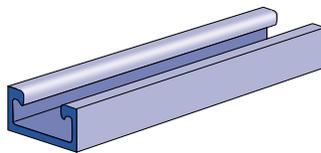
Aluminum Type	Material Thickness		Standard Lengths		Weight/C	
	In	mm	10'	20'	Lbs/Ft	kg/m
6063-T6	.109	2.8	■	■	76	113

## P1001 EA



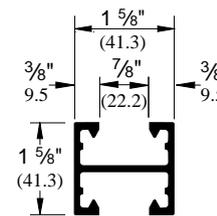
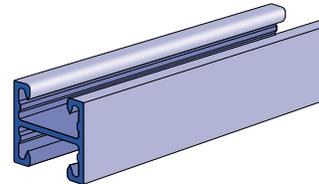
Aluminum Type	Material Thickness		Standard Lengths		Weight/C	
	In	mm	10'	20'	Lbs/Ft	kg/m
6063-T6	.109	2.8	■	■	134	199

## P4000 EA



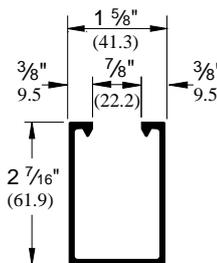
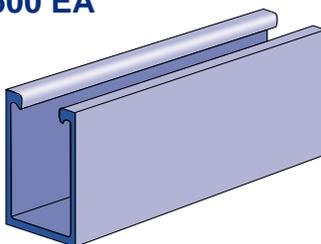
Aluminum Type	Material Thickness		Standard Lengths		Weight/C	
	In	mm	10'	20'	Lbs/Ft	kg/m
6063-T6	.078	2.0	■	■	45	67

## P4001 EA



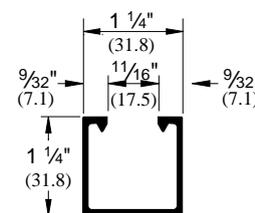
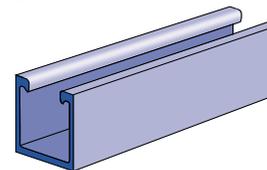
Aluminum Type	Material Thickness		Standard Lengths		Weight/C	
	In	mm	10'	20'	Lbs/Ft	kg/m
6063-T6	.078	1.8	■	■	66	98

## P5500 EA



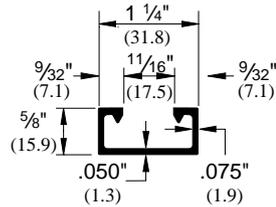
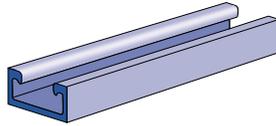
Aluminum Type	Material Thickness		Standard Lengths		Weight/C	
	In	mm	10'	20'	Lbs/Ft	kg/m
6063-T6	.109	2.8	■	■	97	144

## A1000 EA



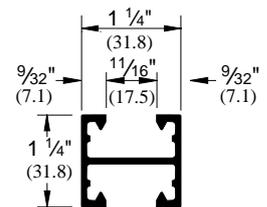
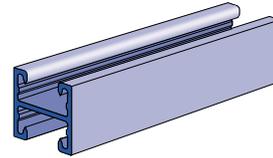
Aluminum Type	Material Thickness		Standard Lengths		Weight/C	
	In	mm	10'	20'	Lbs/Ft	kg/m
6063-T6	.075	1.9	■	■	40	60

## A4000 EA



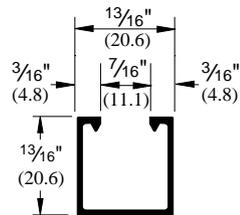
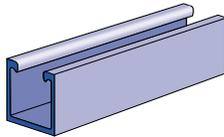
Aluminum Type	Material Thickness		Standard Length	Weight/C	
	In	mm		Lbs/Ft	kg/m
6063-T6	.050	1.3	16'	25	37

## A4001 EA



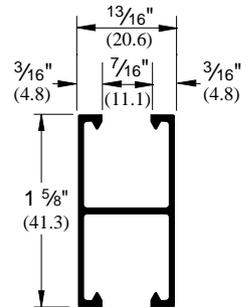
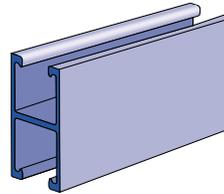
Aluminum Type	Material Thickness		Standard Length	Weight/C	
	In	mm		Lbs/Ft	kg/m
6063-T6	.050	1.3	16'	40	60

## P6000 EA



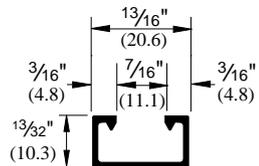
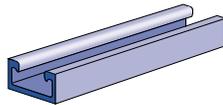
Aluminum Type	Material Thickness		Standard Length	Weight/C	
	In	mm		Lbs/Ft	kg/m
6063-T6	.040	1.0	16'	12	18

## P6001 EA



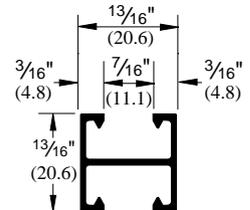
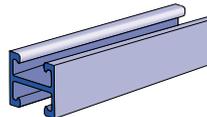
Aluminum Type	Material Thickness		Standard Length	Weight/C	
	In	mm		Lbs/Ft	kg/m
6063-T6	.040	1.0	16'	20	30

## P7000 EA



Aluminum Type	Material Thickness		Standard Length	Weight/C	
	In	mm		Lbs/Ft	kg/m
6063-T6	.040	1.0	10'	9	13

## P7001 EA

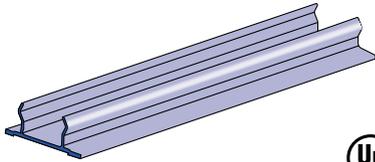


Aluminum Type	Material Thickness		Standard Length	Weight/C	
	In	mm		Lbs/Ft	kg/m
6063-T6	.040	1.0	10'	17	25

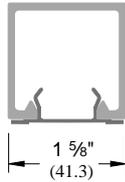
# EXTRUDED ALUMINUM CLOSURE & END CAPS



## P3184 EA



## CLOSURE STRIP



Aluminum Type	Standard Length	Weight/C	
		Lbs/Ft	kg/m
6063-T6	10'	21	31

## P1280 EA P4280 EA P5580 EA

## END CAPS

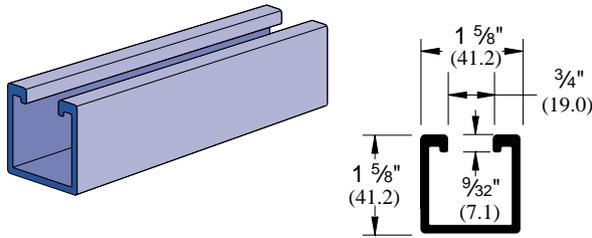


Part Number	Use with Channel	Weight/C	
		Lbs/Ft	kg/m
P1280 EA	P1000 EA	3.5	1.6
P4280 EA	P4000 EA	1.5	0.7
P5500 EA	P5500 EA	4.9	2.2

## NOTES

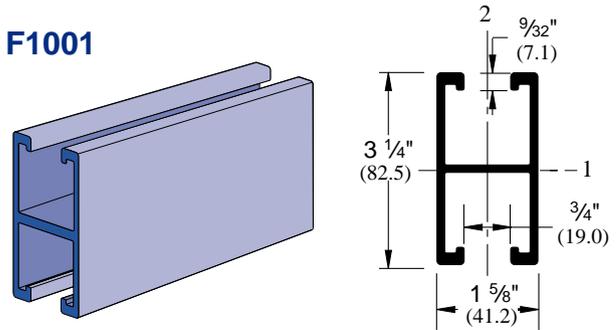
For aluminum channels it is recommended that stainless steel channel nuts shown on page 222 be used. Most fittings shown in the General Fittings Section of this catalog are available in aluminum. Contact your local Unistrut Service Center for assistance.

## F1000



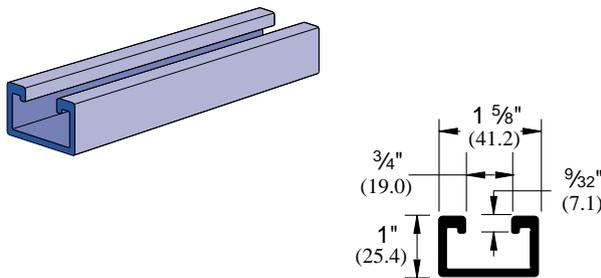
Fiberglass Type		Standard Lengths		Weight/C	
Polyester	Vinyl Ester	10'	20'	Lbs/Ft	kg/m
PE	VE	■	■	68	101

## F1001



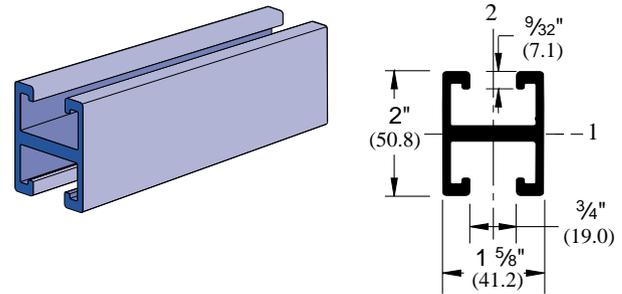
Fiberglass Type		Standard Lengths		Weight/C	
Polyester	Vinyl Ester	10'	20'	Lbs/Ft	kg/m
PE	VE	■	■	136	202

## F3300



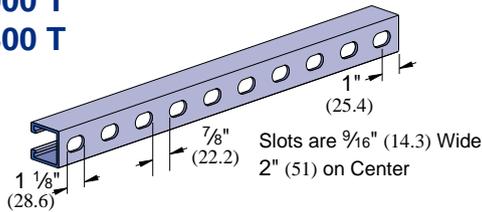
Fiberglass Type		Standard Lengths		Weight/C	
Polyester	Vinyl Ester	10'	20'	Lbs/Ft	kg/m
PE	VE	■	■	47	70

## F3301



Fiberglass Type		Standard Lengths		Weight/C	
Polyester	Vinyl Ester	10'	20'	Lbs/Ft	kg/m
PE	VE	■	■	94	140

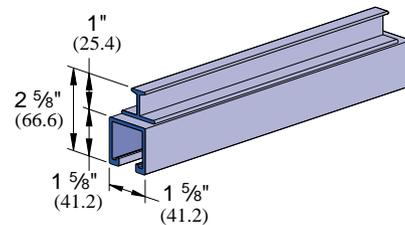
## F1000 T F3300 T



Part Number	Fiberglass Type		Standard Lengths		Weight/C	
	Polyester	Vinyl Ester	10'	20'	Lbs/Ft	kg/m
F1000 T	PE	VE	■	■	68	101
P3300 T	PE	VE	■	■	47	70

## F1248

### CONCRETE INSERT



Fiberglass Type		Standard Length	Weight/C	
Polyester	Vinyl Ester		Lbs/Ft	kg/m
PE	VE	10'	100	149

### NOTES

- Include suffix of "PE" or "VE" for selected resin. Example: F1000 PE (polyester resin).
- All cut channel ends must be sealed with fiberglass sealant. See page 235.

# FIBERGLASS CHANNEL

## BEAM AND COLUMN DATA



### IMPERIAL

Beam Span or Column Height	Part Number	Max. Allowable Uniform Beam Load (Lbs)		Deflection @ Max. Allowable Beam Load (In)		Uniform Load @ Max. Deflection = 0.25 In (Lbs)		Uniform Load @ Max. Deflection = 0.50 In (Lbs)		Max. Allowable Column Load (Lbs)
		Poly	Vinyl	Poly	Vinyl	Poly	Vinyl	Poly	Vinyl	
12"	F1000	1720	2150	0.07	0.07	—	—	—	—	3650
	F1001	5080	6350	0.04	0.04	—	—	—	—	7300
	F3300	790	990	0.11	0.12	—	—	—	—	2550
18"	F1000	1150	1440	0.15	0.17	—	—	—	—	3370
	F1001	3390	4240	0.09	0.10	—	—	—	—	6740
	F3300	530	670	0.24	0.27	—	620	—	—	2350
24"	F1000	860	1080	0.27	0.30	810	910	—	—	2960
	F1001	2540	3180	0.16	0.17	—	—	—	—	5920
	F3300	400	500	0.43	0.48	240	270	—	—	2070
30"	F1000	690	870	0.42	0.48	410	460	—	—	2450
	F1001	2040	2550	0.24	0.27	—	2350	—	—	4900
	F3300	320	400	0.67	0.75	120	140	240	270	1710
36"	F1000	580	730	0.61	0.69	240	270	480	540	1800
	F1001	1700	2130	0.35	0.39	1220	1370	—	—	3600
	F3300	270	340	0.98	1.10	70	80	140	160	1260
48"	F1000	430	540	1.07	1.20	100	115	200	230	1010
	F1001	1270	1590	0.62	0.69	520	590	1040	1170	2020
	F3300	200	250	1.72	1.92	30	35	60	70	700
60"	F1000	350	440	1.70	1.91	60	70	120	135	260
	F1001	1020	1280	0.97	1.09	270	310	540	610	520
	F3300	160	200	2.68	2.99	20	23	40	45	180
72"	F1000	290	370	2.44	2.78	30	34	60	70	NR
	F1001	850	1070	1.40	1.57	160	180	320	360	NR
	F3300	140	180	*	*	10	12	20	23	NR

### METRIC

Beam Span or Column Height (mm)	Part Number	Max. Allowable Uniform Beam Load (kN)		Deflection @ Max. Allowable Beam Load (mm)		Uniform Load @ Max. Deflection = 6.4 mm (kN)		Uniform Load @ Max. Deflection = 12.5 mm (kN)		Max. Allowable Column Load (kN)
		Poly	Vinyl	Poly	Vinyl	Poly	Vinyl	Poly	Vinyl	
305	F1000	7.7	9.6	2	2	—	—	—	—	16.2
	F1001	22.6	28.2	1	1	—	—	—	—	32.5
	F3300	3.5	4.4	3	3	—	—	—	—	11.3
457	F1000	5.1	6.4	4	4	—	—	—	—	15.0
	F1001	15.1	18.9	2	3	—	—	—	—	30.0
	F3300	2.4	3.0	6	7	—	2.8	—	—	10.5
610	F1000	3.8	4.8	7	8	3.6	4.0	—	—	13.2
	F1001	11.3	14.1	4	4	—	—	—	—	26.3
	F3300	1.8	2.2	11	12	1.1	1.2	—	—	9.2
762	F1000	3.1	3.9	11	12	1.8	2.0	—	—	10.9
	F1001	9.1	11.3	6	7	—	10.5	—	—	21.8
	F3300	1.4	1.8	17	19	0.5	0.6	1.1	1.2	7.6
914	F1000	2.6	3.2	15	18	1.1	1.2	2.1	2.4	8.0
	F1001	7.6	9.5	9	10	5.4	6.1	—	—	16.0
	F3300	1.2	1.5	25	28	0.3	0.4	0.6	0.7	5.6
1219	F1000	1.9	2.4	27	30	0.4	0.5	0.9	1.0	4.5
	F1001	5.6	7.1	16	18	2.3	2.6	4.6	5.2	9.0
	F3300	0.9	1.1	44	49	0.1	0.2	0.3	0.3	3.1
1524	F1000	1.6	2.0	43	49	0.3	0.3	0.5	0.6	1.2
	F1001	4.5	5.7	25	28	1.2	1.4	2.4	2.7	2.3
	F3300	0.7	0.9	68	76	0.1	0.1	0.2	0.2	0.8
1829	F1000	1.3	1.6	62	71	0.1	0.2	0.3	0.3	NR
	F1001	3.8	4.8	36	40	0.7	0.8	1.4	1.6	NR
	F3300	0.6	0.8	*	*	0.1	0.1	0.1	0.1	NR

**BEAM LOADS:** Allowable uniformly distributed beam loads are listed for various simple spans, that is, a beam on two supports with a safety factor of 2. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.

**COLUMN LOADS:** Table lists the total allowable axial load for various unsupported column heights based on a minimum safety factor of 3. Eccentric loads should be reduced according to standard practice.

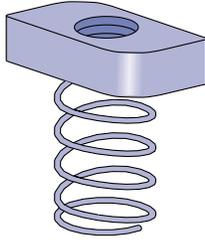
**NOTES:** Long span beams should be supported in such a manner as to prevent rotation and twist.

\* Deflection is in excess of 3.00 inches; mid-span support is recommended.

NR=Not recommended.

## F1008 VE F1010 VE

### FRP SPRING NUTS



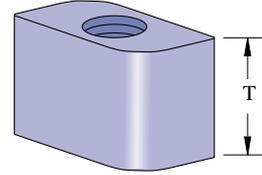
- Designed for use with F1000 only.
- Resistance to slip - 450 Lbs (2.0 kN) per bolt.
- Pull out strength - 700 Lbs (3.1 kN) per bolt.
- Safety factor of 3.

Material: Fiberglass reinforced plastic with vinyl ester resin.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
<b>F1008 VE</b>	3/8"-16 UNC	4.2	1.9
<b>F1010 VE</b>	1/2"-13 UNC	4.0	1.8

## F3008 VE F3010 VE

### FRP CHANNEL NUTS

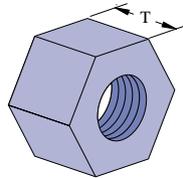


- Channel nuts are self locking and designed for use with F1000 only.
- For strength factors see Spring Nuts at left.

Material: Fiberglass reinforced plastic with vinyl ester resin.

Part Number	Size/ Thread	"T"		Weight/C	
		In	mm	Lbs	kg
<b>F3008 VE</b>	3/8"-16 UNC	3/4	19	5.5	2.5
<b>F3010 VE</b>	1/2"-13 UNC	1 1/16	28	5.0	2.3

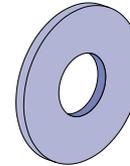
## FRP HEX NUTS



Material: Fiberglass reinforced plastic with vinyl ester resin.

Part Number	Size/ Thread	"T"		Weight/C		
		In	mm	Lbs	kg	
<b>FHXN037 VE</b>	3/8"-16 UNC	5/8	16	2.4	1.1	
<b>FHXN050 VE</b>	1/2"-13 UNC	5/8	16	2.2	1.0	
<b>FHXN062 VE</b>	5/8"-11 UNC	7/8	22	6.1	2.8	
<b>FHXN075 VE</b>	3/4"-10 UNC	7/8	22	5.4	2.5	
<b>FHXN100 VE</b>	1" - 8 UNC	1 1/4	32	20.5	9.3	

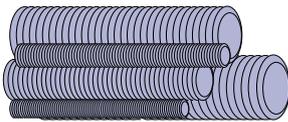
## FRP FLAT WASHERS



Material: Fiberglass reinforced plastic with vinyl ester resin.

Part Number	Size	Weight/C	
		Lbs	kg
<b>FFLW037 VE</b>	3/8"	1.3	0.6
<b>FFLW050 VE</b>	1/2"		
<b>FFLW062 VE</b>	5/8"		
<b>FFLW075 VE</b>	3/4"		
<b>FFLW100 VE</b>	1"		

## FRP THREADED RODS

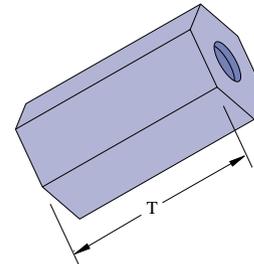


- It is NOT recommended that FRP threaded rod be used in conjunction with steel or PCV coated steel beam clamps or nuts.
- Threaded shear could occur due to insufficient thread engagement.
- Seal exposed FRP threads after installation of threaded rod and hex nuts.

Available in 8 Ft lengths.

Part Number	Size/ Thread	Weight/C	
		Lbs/Ft	kg/m
<b>FTHR037 VE</b>	3/8"-16 UNC	7.0	10.4
<b>FTHR050 VE</b>	1/2"-13 UNC	12.0	17.9
<b>FTHR062 VE</b>	5/8"-11 UNC	18.0	26.8
<b>FTHR075 VE</b>	3/4"-10 UNC	28.0	41.7
<b>FTHR100 VE</b>	1" - 8 UNC	50.0	74.4

## FRP ROD COUPLERS



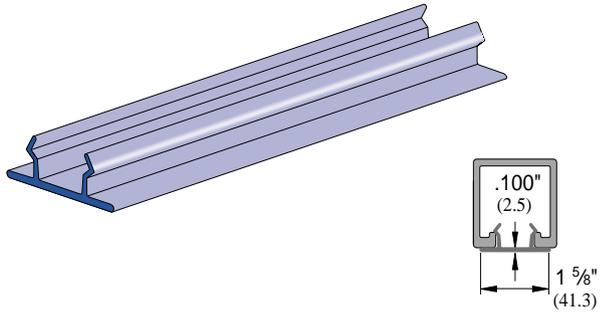
Minimum thread engagement must be 3/4".

Material: Fiberglass reinforced plastic with vinyl ester resin.

Part Number	Size/ Thread	"T"		Weight/C	
		In	mm	Lbs	kg
<b>FRCNO37 VE</b>	3/8"-16 UNC	2	51	7.8	3.5
<b>FRCNO50 VE</b>	1/2"-13 UNC	2	51	7.0	3.2
<b>FRCNO62 VE</b>	5/8"-11 UNC	2	51	13.7	6.2
<b>FRCNO75 VE</b>	3/4"-10 UNC	2	51	12.7	5.8
<b>FRCN100 VE</b>	1" - 8 UNC	2 3/4	70	44.0	20.0

## F3712 P

### CLOSURE STRIP

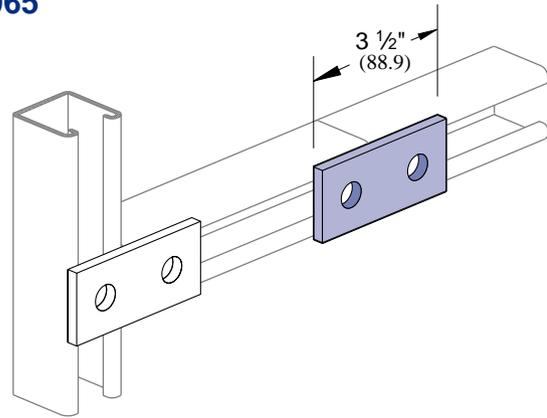


Material: Noryl® Plastic

Standard Length: 10 Ft.

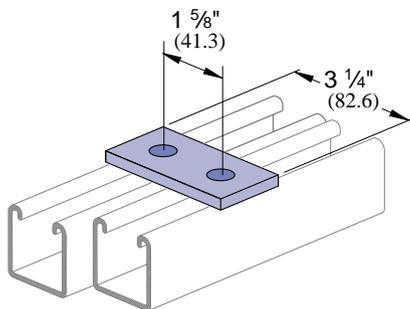
Weight/C Ft: 10.5 Lbs (15.6 kg/100 m)

## F1065



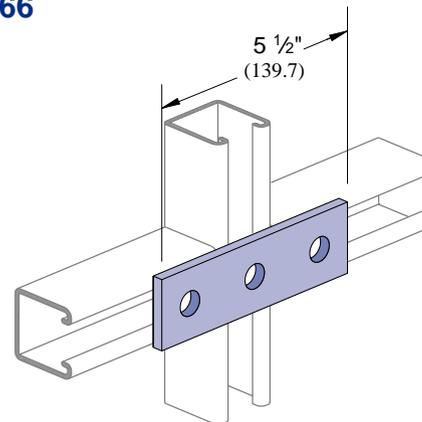
Weight/C: 11.6 Lbs (5.3 kg)

## F1924



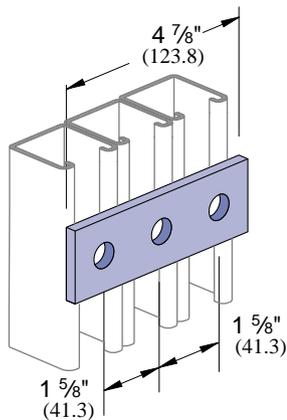
Weight/C: 11.0 Lbs (5.0 kg)

## F1066



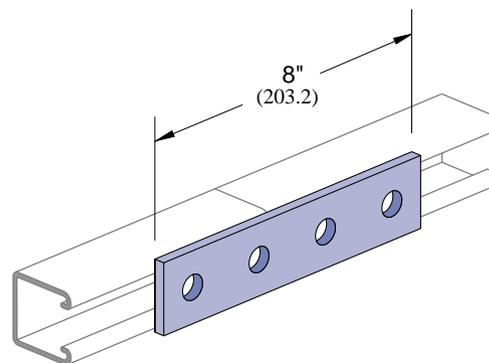
Weight/C: 18.0 Lbs (8.2 kg)

## F1925



Weight/C: 16.0 Lbs (7.3 kg)

## F1067

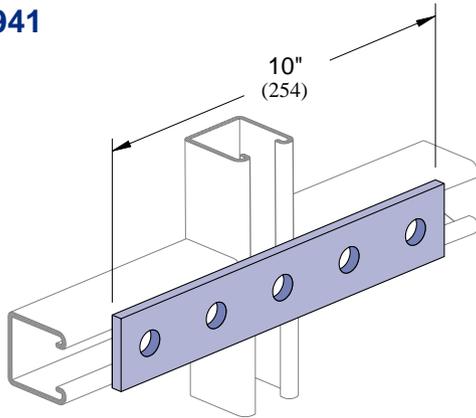


Weight/C: 20.6 Lbs (9.3 kg)

### NOTES

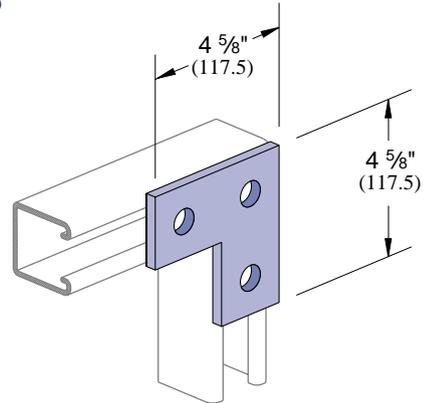
- Include suffix of "PE" or "VE" for selected resin. Example: F1000 PE (polyester resin).
- All cut channel ends must be sealed with fiberglass sealant. See page 235.

**F1941**



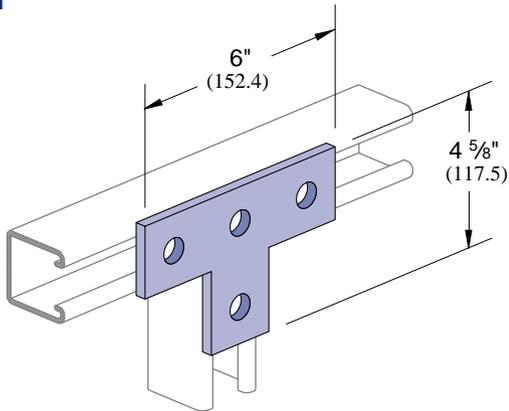
Weight/C: 25.7 Lbs (11.7 kg)

**F1036**



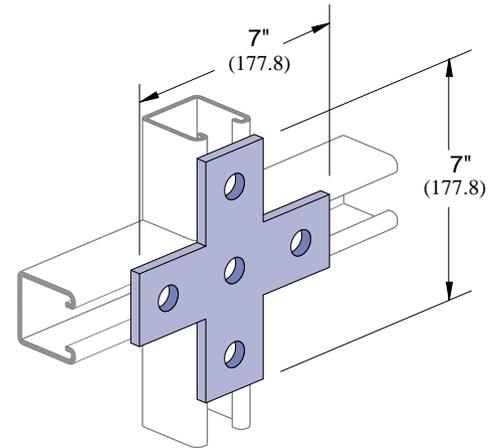
Weight/C: 19.0 Lbs (8.6 kg)

**F1031**



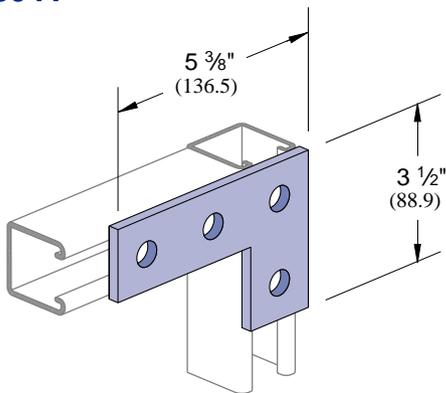
Weight/C: 25.4 Lbs (11.5 kg)

**F1028**



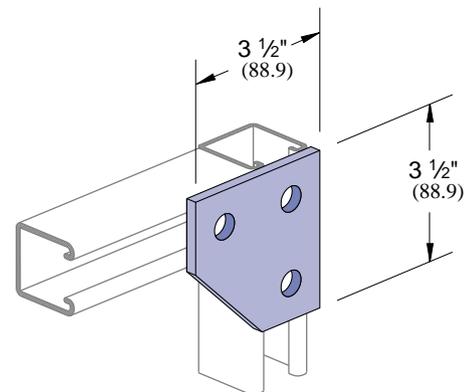
Weight/C: 32.8 Lbs (14.9 kg)

**F1380 A**



Weight/C: 25.4 Lbs (11.5 kg)

**F1334**

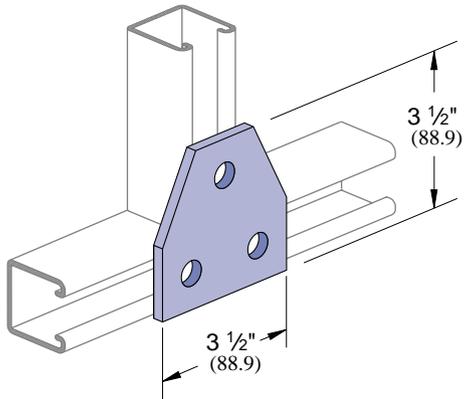


Weight/C: 19.2 Lbs (8.7 kg)

## NOTES

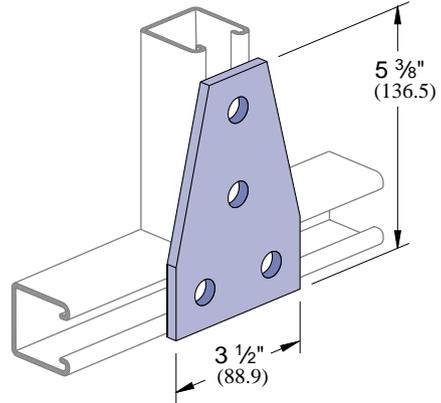
- Include suffix of "PE" or "VE" for selected resin. Example: F1000 PE (polyester resin).
- All cut channel ends must be sealed with fiberglass sealant. See page 235.

**F1356**



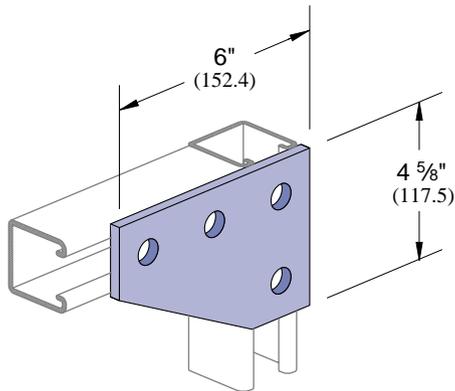
Weight/C: 19.2 Lbs (8.7 kg)

**F1358**



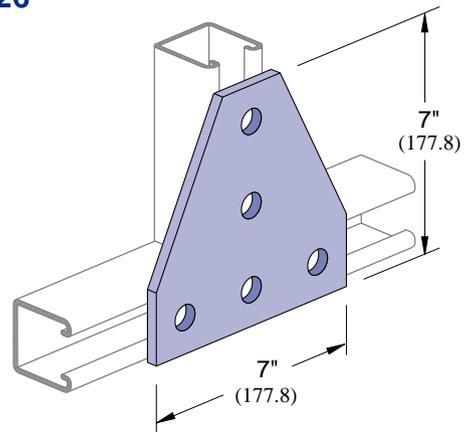
Weight/C: 42.7 Lbs (19.4 kg)

**F1380**



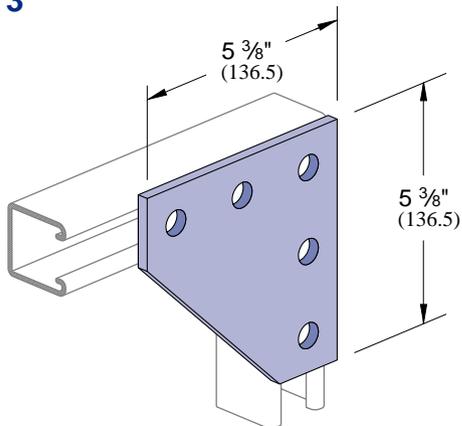
Weight/C: 42.7 Lbs (19.4 kg)

**F1726**



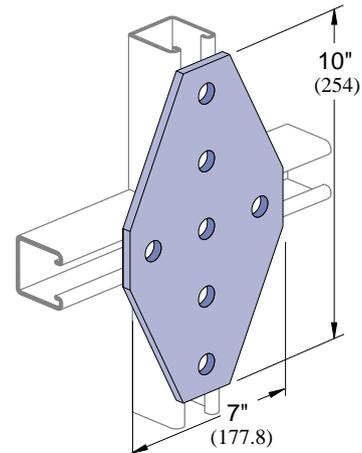
Weight/C: 77.5 Lbs (35.2 kg)

**F1873**



Weight/C: 77.5 Lbs (35.2 kg)

**F1950**

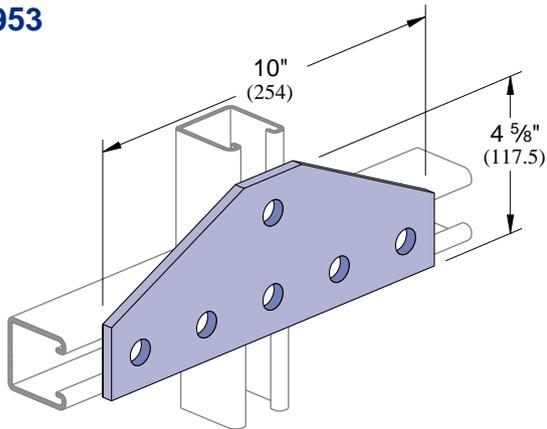


Weight/C: 110.8 Lbs (50.3 kg)

## NOTES

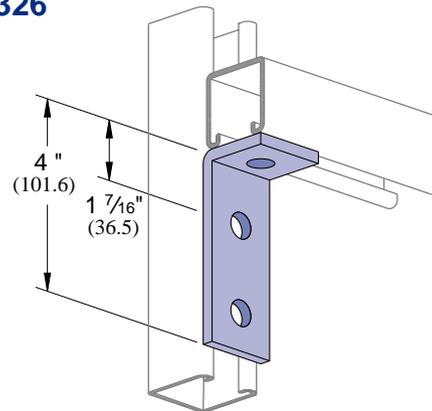
- Include suffix of "PE" or "VE" for selected resin. Example: F1000 PE (polyester resin).
- All cut channel ends must be sealed with fiberglass sealant. See page 235.

**F1953**



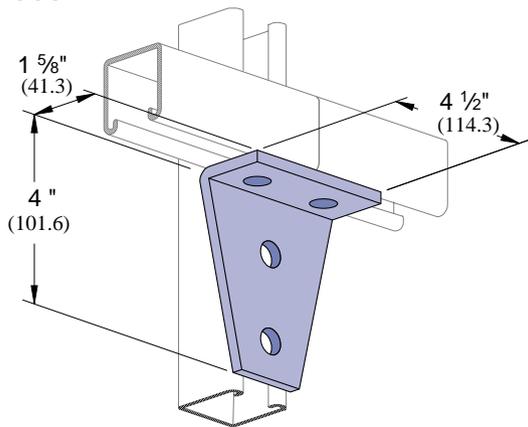
Weight/C: 71.2 Lbs (32.3 kg)

**F1326**



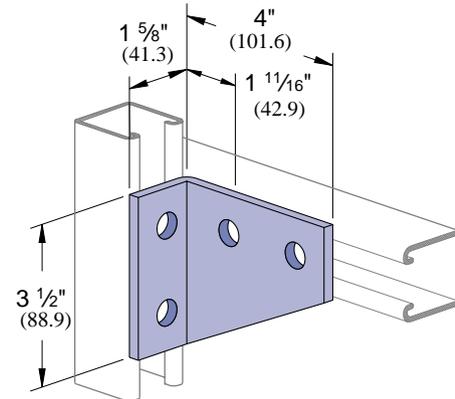
Weight/C: 28.0 Lbs (12.7 kg)

**F1359**



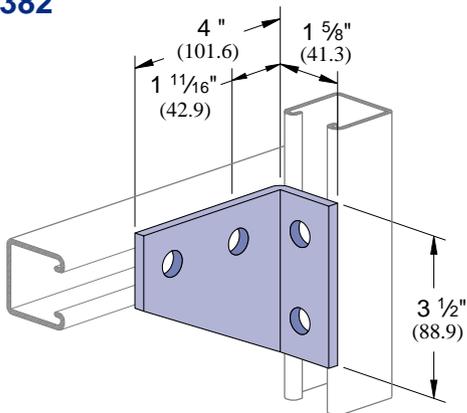
Weight/C: 78.0 Lbs (35.4 kg)

**F1381**



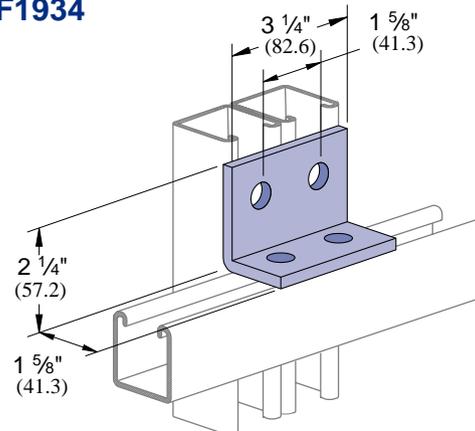
Weight/C: 78.0 Lbs (35.4 kg)

**F1382**



Weight/C: 78.0 Lbs (35.4 kg)

**F1934**



Weight/C: 51.2 Lbs (23.2 kg)

**NOTES**

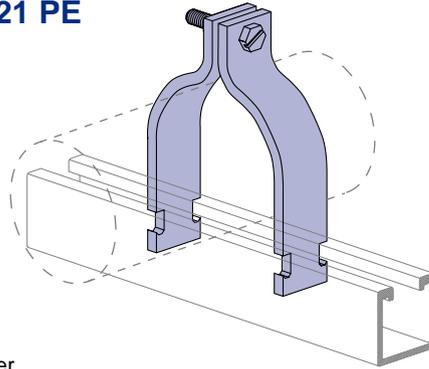
- Include suffix of "PE" or "VE" for selected resin. Example: F1000 PE (polyester resin).
- All cut channel ends must be sealed with fiberglass sealant. See page 235.

# FIBERGLASS PIPE CLAMPS AND HANGERS



## F1111 PE thru F1121 PE

### UNIVERSAL PIPE CLAMPS



- Standard hardware includes nylon hex bolt and nut.
- If stainless steel hardware is preferred, indicate by adding letter "S" after the part number. Example: F1111 PES.

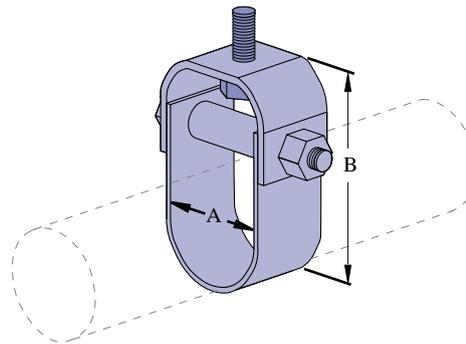
Material: Thermoplastic Polyester.

Conduit Outside Diameter

Part Number	Pipe Size	Weight/C		PVC Schedule 40 & 80		PVC Coated Steel		Rigid Steel		Filament Wound (FRP)	
		Lbs	kg	In	mm	In	mm	In	mm	In	mm
F1111 PE	1/2"	7.7	3.5	0.840	21	0.920	23	0.840	21	—	—
F1112 PE	3/4"	8.3	3.8	1.050	27	1.130	29	1.050	27	0.890	23
F1113 PE	1"	9.4	4.3	1.315	33	1.395	35	1.315	33	1.195	30
F1114 PE	1 1/4"	10.6	4.8	1.660	42	1.740	44	1.660	42	1.507	38
F1115 PE	1 1/2"	12.2	5.5	1.900	48	1.980	50	1.900	48	1.757	45
F1117 PE	2"	13.4	6.1	2.375	60	2.455	62	2.375	60	2.132	54
F1118 PE	2 1/2"	13.8	6.3	2.875	73	2.955	75	2.875	73	2.650	67
F1119 PE	3"	15.0	6.8	3.500	89	3.580	91	3.500	89	3.132	80
F1120 PE	3 1/2"	20.0	9.1	4.000	102	4.080	104	4.000	102	3.632	92
F1121 PE	4"	21.7	9.8	4.500	114	4.580	116	4.500	114	4.132	105

## FC010 VE thru FC120 VE

### FIBERGLASS CLEVIS HANGERS



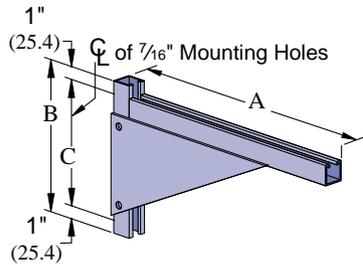
- Hanger rod and hex nut sold separately.

Material: Fiberglass reinforced plastic with vinyl ester resin.

Safety factor 3 at 120°F (49°C).

Part Number	Nominal Diameter	Weight/C		Max. Pipe O.D. "A"		Dimension "B"		Bolt Length		Hanger Rod	Max. Allowable Load	
		Lbs	kg	In	mm	In	mm	In	mm		Lbs	kN
FC010 VE	1"	22	10	1 1/2	38	4	102	3 3/4	95	1/2"	200	0.89
FC015 VE	1 1/2"	27	12	2	51	4 1/4	108	4 1/4	108	1/2"	200	0.89
FC020 VE	2"	32	15	2 5/8	67	5 1/8	130	4 7/8	134	1/2"	200	0.89
FC025 VE	2 1/2"	44	20	3 1/4	83	5 1/4	133	5	127	1/2"	200	0.89
FC030 VE	3"	52	24	3 7/8	98	7 1/8	181	6 1/4	159	1/2"	300	1.33
FC040 VE	4"	75	34	5 1/8	130	8 3/4	222	7 3/4	197	5/8"	400	1.78
FC060 VE	6"	119	54	7 1/8	181	11 1/2	292	9 3/4	248	5/8"	600	2.67
FC080 VE	8"	199	90	9 1/8	235	14 5/8	371	12	305	5/8"	600	2.67
FC100 VE	10"	321	146	11 3/8	289	18 1/4	454	13 1/2	343	5/8"	600	2.67
FC120 VE	12"	437	198	13 1/2	343	21 3/8	543	16 1/2	419	5/8"	600	2.67

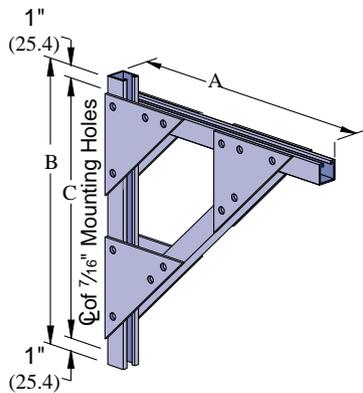
## F2493 thru F2501



Part Number	Weight/C		Dimensions						Max. Allowable Uniform Load	
			"A"		"B"		"C"			
	Lbs	kg	In	mm	In	mm	In	mm	Lbs	kN
<b>F2493</b>	386	175	10	254	12	305	10	254	1600	7.12
<b>F2494</b>	406	184	13	330	12	305	10	254	1100	4.89
<b>F2496</b>	429	195	16	406	12	305	10	254	850	3.78
<b>F2499</b>	450	204	22	559	12	305	10	254	725	3.23
<b>F2501</b>	574	260	28	711	12	305	10	254	480	2.14

\* Allowable load is based on total load, uniformly distributed over the length of the rack. Safety factor 2.

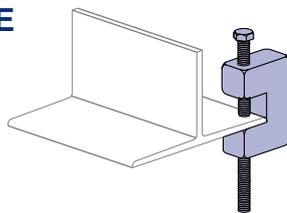
## F2502 F2504 F2506



Part Number	Weight/C		Dimensions						Max. Allowable Uniform Load	
			"A"		"B"		"C"			
	Lbs	kg	In	mm	In	mm	In	mm	Lbs	kN
<b>F2502</b>	722	327	28	711	23	584	21	533	750	3.34
<b>F2504</b>	830	376	34	864	26	660	24	610	750	3.34
<b>F2505</b>	955	433	40	1016	29	737	27	686	750	3.34

## F5660 VE F5661 VE

### SINGLE BEAM CLAMP



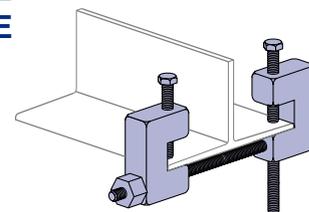
Set screw included.  
Available in vinyl ester only.

Ultimate load = 300 Lbs (1.3 kN).

Part Number	Use with FRP Rod Size	Weight/C	
		Lbs	kg
<b>F5660 VE</b>	3/8"	43.8	19.9
<b>F5661 VE</b>	1/2"	43.8	19.9

## F5662 VE F5663 VE

### DOUBLE BEAM CLAMP



Set screw included.

Ultimate load = 300 Lbs (1.3 kN).

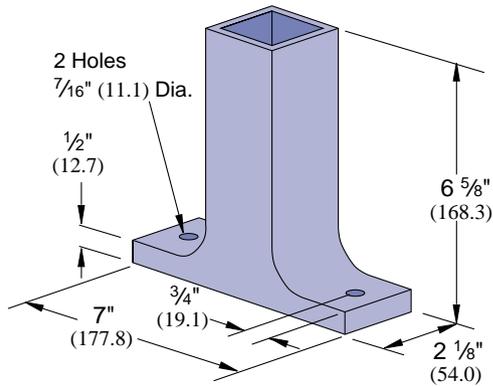
Part Number	Use with FRP Rod Size	Weight/C	
		Lbs	kg
<b>F5662 VE</b>	3/8"	93.3	42.3
<b>F5663 VE</b>	1/2"	93.3	42.3

### NOTES

Indicate resin choice by inserting the letters "PE" or "VE".

## F5610 VE

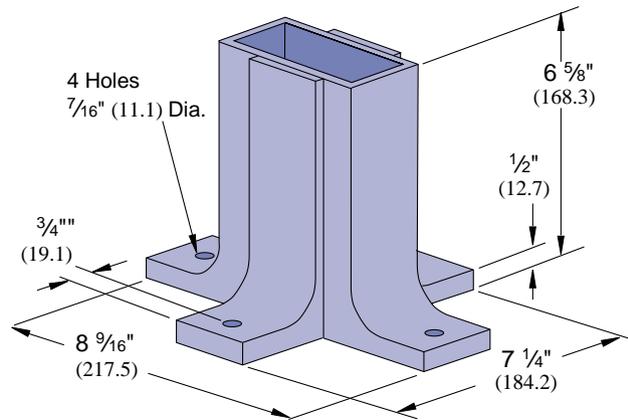
POST  
BASE  
FOR F1000



Weight/C: 103 Lbs (46.7 kg)

## F5611 VE

POST  
BASE  
FOR F1001



Weight/C: 166 Lbs (75.3 kg)

ES-G  
ES-Q

SEALANT



- Seals exposed fibers after any field cuts.
- Restores gloss and luster to weathered fiberglass.
- Seals exposed FRP threads after installation of threaded rod and hex nuts.
- Available in quart (ES-Q) or gallon (ES-G) cans

Weight Per Piece: 12 Lbs (5.5 kg)  
Weight Per Piece: 3 Lbs (1.4 kg)

### TYPICAL PROPERTIES OF FRP THREADED ROD

Properties	3/8-16 UNC	1/2-13 UNC	5/8-11 UNC	3/4-10 UNC	1-8 UNC
Thread shear strength using —fiberglass nut in tensile load	1,250 Lbs (5.6 kN)	2,200 Lbs (9.8 kN)	3,100 Lbs (13.9 kN)	4,500 Lbs (20.0 kN)	6,500 Lbs (28.9 kN)
Transverse shear on threaded rod —double shear ASTM-B-565	3,000 Lbs (13.3 kN)	5,000 Lbs (22.2 kN)	7,500 Lbs (33.4 kN)	12,000 Lbs (53.4 kN)	22,000 Lbs (97.9 kN)
Traverse shear on threaded rod —single shear	1,600 Lbs (7.1 kN)	2,600 Lbs (11.6 kN)	3,800 Lbs (16.9 kN)	6,200 Lbs (27.6 kN)	15,000 Lbs (66.7 kN)
Compressive strength —longitudinal ASTM-D-695	54,000 PSI (37,200 K Pa)	54,000 PSI (37,200 K Pa)	54,000 PSI (37,200 K Pa)	54,000 PSI (37,200 K Pa)	65,000 PSI (44,814 K Pa)
Flexural strength ASTM-D-790	55,000 PSI (37,920 K Pa)	55,000 PSI (37,920 K Pa)	55,000 PSI (37,920 K Pa)	55,000 PSI (37,920 K Pa)	60,000 PSI (41,366 K Pa)
Flexural modulus ASTM-D-790 (10 <sup>6</sup> )	2.0 PSI (1.4 K Pa)	2.0 PSI (1.4 K Pa)	2.0 PSI (1.4 K Pa)	2.50 PSI (1.7 K Pa)	2.75 PSI (1.9 K Pa)
Torque strength using fiberglass nut —lubricated with SAE 10W30 motor oil	8 Ft Lbs (11 N•m)	18 Ft Lbs (24 N•m)	35 Ft Lbs (48 N•m)	50 Ft Lbs (68 N•m)	110 Ft Lbs (148 N•m)
Dielectric strength ASTM-D-149	35 KV/In (88.9 KV/cm)				
Water absorption 24 hour immersion —threaded ASTM-D-570	1%				
Coefficient of thermal expansion —longitudinal	5 x 10 <sup>-6</sup> In/In/°F (7.8 cm/cm/°C)				
Max. recommended operation temp. —based on 50% retention of ultimate thread shear strength	200°F (93°C)				
Flammability	Self-extinguishing				

### RESIN SYSTEMS

Two standard composite resin systems are available. For most applications, polyester fire-retardant (FR-P) is the more widely used. A vinyl ester composite fire-retardant resin system (FR-VE) is recommended where strong acids such as hydrochloric

acid, strong alkalis such as caustic soda, organic solvents and halogenated organic conditions exist. (An abbreviated "Corrosion Resistance Guide" is provided below to guide in the selection of the proper resin system for individual application.)

Corrosion Resistance Guide					
Chemicals	75°F (24°C)	160°F (91°C)	Chemicals	75°F (24°C)	160°F (91°C)
Acetic acid 5%	FR-P	FR-P	Methyl alcohol 10%	FR-P	*FR-VE-150° (66°C)
Acetic acid 25%	FR-P	*FR-VE-210° (99°C)	Naphtha	FR-P	FR-P
Aluminum potassium sulfate 5%	FR-P	FR-P	Nitric acid 5%	FR-P	FR-P
Ammonium hydroxide 10%	FR-P	FR-VE-150° (66°C)	Nitric acid 20%	FR-VE	*FR-VE-120° (49°C)
Ammonium nitrate	FR-P	FR-P	Phosphoric acid 10%	FR-P	FR-P
Benzenesulfonic acid 5%	FR-P	FR-P	Phosphoric acid 30%	FR-P	FR-P
Calcium chloride	FR-P	FR-P	Phosphoric acid 85%	FR-P	FR-P
Carbon tetrachloride	FR-VE	*FR-VE-100° (38°C)	Sodium bicarbonate 10%	FR-P	FR-P
Chlorine dioxide 15%	FR-P	*FR-VE-150° (66°C)	Sodium bisulfate	FR-P	FR-P
Chromic acid 5%	FR-P	*FR-VE-150° (66°C) (Call)	Sodium carbonate	FR-P	FR-VE
Copper sulfate	FR-P	FR-P	Sodium chloride	FR-P	FR-P
Diesel fuel, No. 1	FR-P	FR-P	Sodium hydroxide up to 50%	FR-P	*FR-VE-120° (49°C)
Diesel fuel, No. 2	FR-P	FR-P	Sodium hypochlorite 5%	FR-P	*FR-VE-120° (49°C)
Ethylene glycol	FR-P	FR-P	Sodium nitrate	FR-P	FR-P
Fatty acids 100%	FR-P	FR-P	Sodium silicate	FR-P	*FR-VE-210° (99°C)
Ferrous sulfate	FR-P	FR-P	Sodium sulfate	FR-P	FR-P
Fluosilicic acid 0-20%	FR-VE	FR-VE (Call)	Sulfuric acid 0-30%	FR-P	FR-P
Hydrochloric acid 1%	FR-P	FR-P	Sulfuric acid 30-50%	FR-VE	FR-VE
Hydrochloric acid 15%	FR-P	*FR-VE-180° (82°C)	Sulfuric acid 50-70%	FR-VE	*FR-VE-180° (82°C)
Hydrochloric acid 37%	FR-P	*FR-VE-150° (66°C)	Trisodium phosphate 25%	FR-P	*FR-VE-210° (99°C)
Kerosene	FR-P	FR-P	Trisodium phosphate-All	FR-VE	*FR-VE-210° (99°C)
Magnesium chloride	FR-P	FR-P	Water, Distilled	FR-P	FR-P

FR—Fire-retardant

P—Polyester resin

VE—Vinyl ester resin

\* Not recommended to exceed this temperature

Call—Call for recommendations

Information contained in this chart is based on data from raw material suppliers and collected from several years of actual industrial applications.

Temperatures are not the minimum nor the maximum (except where specifically stated but represent standard test conditions. The products may be suitable at higher temperatures but individual test data should be required to establish such suitability.

The recommendations or suggestions contained in this chart are made without guarantee or representation as to results. We suggest that you evaluate these recommendations and suggestions in your own laboratory or actual field trial prior to use.